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INDEX TO THE MODERN HOSPITAL

Volume IX, July to December, Inclusive, 1917

This index contains in a single alphabetical sequence the names of authors and subjects of all articles published in THE MODERN HOSPITAL during the six months covered by this volume. The following abbreviations indicate special departments in which articles appeared: Ab., abstract in Current Hospital Literature; Bk. Rev., Book Reviews; Corr., Letters to the Editor or Foreign Correspondence; Ed., Editorial; Hint, Hints for Hospital Superintendents; Q. and A., Queries and Answers.

A

Abbott, Helen—Tuberculosis Department of San Francisco Hospital From the Dietitian's Point of View....447
Accounting, Report of Committee on—Warner, Greene and McEachern....355
Addison County Hospital, Middlebury, Vt.—Walker....240
Administration, Hospital, Divided Authority in (Ed.)....186
Administrative Articles (see also Standardization of Hospitals)—
Accounting, Report of Commmittee on—Warner, Greene and McEachern....355
Blanket Problem, Sanatorium—Rockwood....98
Boston Dispensary in Its One Hundred and Twentieth Year....303
Buyer for the Hospital—Reid....128
Buying Problem in War Time (Ed.)....188
Clinical Laboratory of Albany Hospital—Graham....158
Dietary, Correct, Responsibility of Superintendent for—Blanchfield....373
Dietitian, Scope of Duties of—Cooper....139
Dispensary, Function of—Ransom....223
Economies, Institutional, for War Time....20
Economy, Problem in (Corr.)....230
Eye Clinics, Children's, New York—Carhart....171
Food Boxes, Heated, of Philadelphia General Hospital—Wallace..301
Food Conservation, Methods of....217
Food Truck, Electrically Heated, of Massachusetts General Hospital—Howland....301
Food, Waste of, Printed Forms to Prevent—Summersgill (Corr.)..380
Gauze and Cotton, Used, Reclaiming—Test....22
Hospital Problem of Today—What is it?—Hornsby....322
Hospitals and Workmen's Compensation—Howell and Buckley..234
Jewish Home for Chronic Invalids of St. Louis—Kaplan and Simon....459
Laundry Work, Better—Warner (Corr.)....135
Married Institutional Physicians, Plea for—Scheffel (Corr.)....230
Morbidity Statistics, Hospital, Standardization of....183
Nursing, Records of Schools of—Bell....34
Oil as Fuel in Institutions—Peters....328
Operating Room, White—Secor....170
Preventive Medicine, Department of in Children's Hospital—Dorwarth (Ab.)....291
Public Health Work of Children's Hospital—Dorwarth....242
Publicity, Hospital, as Means of Education and Support—Greene..336
Small-Town Hospital—Some of the Bases of Its Success—Phifer..412
Social Service Work, Possibilities of, in Eye Hospital or Dispensary—Brannick....219
Supplies, Economical Use of, Controlling Basis for—Moss....318
Surgery, Artificial Daylight in—Luckiesch....311
Surgical Dressings, Economy in Cutting of—McGrath....8
Aeroplane, Transportation of Wounded Soldiers by (Ab.)—Blanchard....141
Aged, Care of (Discovered—A New People) (Ed.)....25
Aged, Institutional Care of—Nascher....4
Ager, Louis C.—New York American Emergency Hospital for Aftercare of Infantile Paralysis....166
Agricultural Preparedness and State Hospitals (Ed.)—Hurd....24
Albany Hospital, Clinical Laboratory of—Graham....158
Alberti, A.—Psychiatric Services of the War (Ab.)....450
Almond Extract—Street....17
Almshouse Administration, Standards of—Bardwell....393
Ambulance Boats, Conversion of Yachts Into—Eaton....81
Ambulance of the American Hospital of Paris as Seen by a Surgeon (Ab.)—Stewart....67
Ambulance Ship, First Private Yacht Given for....439
Ambulance, Surgical Automobile (Ab.)—Monod....141
Ambulances, Motor, Last Word in....369
America, Great Hospitals of....387
American Ambulance Hospital in Paris....349
American College of Surgeons, Meeting of to Standardize Hospitals....183, 311, 421
American Fund for French Wounded, Motor Service of, and its "Wonderful Chauffeuses"....210
American Hospital Association—
Cleveland Meeting of (Ed.)....117, 268
Cleveland Meeting, Preliminary Announcements of....136, 189
Cleveland Meeting, Report of....273
Committee Appointments for 1917-1918....437
Executive Offices Move to Washington....349
Official Bulletin for June....55
Official Bulletin for July....137
Official Bulletin for August....194
Report of Board of Trustees, 1917....285
Report of Secretary—Walsh....280
American Hospital Association and "The Modern Hospital," Sir Henry Burdett's Appreciation of....206
American Hospital of Paris, Ambulance of, as Seen by a Surgeon—Stewart (Ab.)....67
American Medical Association, Sixty-Eighth Annual Session of....59
Amsterdam, New Division for Babies in Emma Children's Hospital in—Schippers (Ab.)....377
Anesthesia (Gas-Oxygen-Ether) Apparatus, Connell....228
Antituberculosis: see Tuberculosis.
Architectural Articles—
Addison County Hospital, Middlebury, Vt.—Walker....240
Columbia War Hospital—Wood....112
Conversion of Yachts into Ambulance Boats—Eaton....81
Contagious Disease Hospital for Immigrants, Ellis Island, N. Y.—Wilson....332
Fire, Prevention of in Hospital Buildings—Porter....333
French War Hospital System....120
Henry W. Putnam Memorial Hospital, Bennington, Vt.—Walker.. 1
Herman Knapp Memorial Eye Hospital, New York City—Knapp..153
James J. Gray Clinic in Atlanta, Ga.—Hinton and Hentz....177
Jasper County (Mo.) Tuberculosis Hospital—Cummings....406
Massachusetts General Hospital, Private Ward of—Howland....389
New York American Emergency Hospital for After-Care of Poliomyelitis—Ager....166
Queen Alexandra's Hospital for Officers....122
Rockefeller Institute War Demonstration Hospital—Butler....73
Architecture, Hospital, and New Trustee....231
Architecture, Hospital, and Sunlight—van Walsem (Ab.)....376
Armour, J. Ogden, on Truth About Price of Meat....448
Army Hospitals: see Military Hospitals.
Army, Reclamation of Rejected Candidate for—Quayle....415
Army Service, Hospital Treatment for Remediable Disqualifications for (Ed)....27
Army, Social Hygiene in During War Time—Foster....65
Army, H. V.—Medicine and Metrics....174
Asepto Syringe....382
Atomizer, Paraffine, Electrically Heated....309
Austin, S. H.—Needs and Welfare of Blind....202
Autocrat, Benevolent....231

B

Babies; see also Infants.
Babies' Dispensary and Hospital, Cleveland....199
Baby Camp, Bethany Hospital....33
Baby Dressing Table, Folding....385
Bacon, Asa S.—Food Economies in the Presbyterian Hospital, Chicago....21
Bacteriology, Teaching of in Schools for Nurses—Pfefferkorn....362
Baer, Joseph L.—Relation of the Nurses' Training to the Great War....129
Bandage Roller, Electric, Hoffman Blue Cross....384
Bardwell, Francis—Standards of Almshouse Administration....393
Barlow Sanatorium, Economy at—Klotz (Corr.)....453
Barrack Hospital, Large, Arrangement and Management of During the War—Steffelaar (Ab.)....449
Barrack-Tent (Patented) With a Dismountable Floor of the Mobile Surgical Ambulance of Army....385
Basic Quantity Food Tables to be Used in Determining the Daily Issue of Food to Kitchen (Bk. Rev.)....308
Bathing Facilities for Soldiers at the Front....209
Beard, Mary—The Family as the Unit of Public Health Work....247
A Correction (Corr.)....454
Bed Carrier....383
Bedroom, Window of—van Walsen (Ab.)....226
Bell, Alice F.—Records of Schools of Nursing....34
Bennett, Estelline—Hospital Cars for the Canadian Government....32
Bergeggi, First Climatic Military Institute of Red Cross Opened at (Ab.)....67
Bethany Hospital Baby Camp....33
Biassono, Opening of First Tuberculosis Sanatorium at (Ab.)....226
Bignami, L.—Protection of the Poor Insane (Ab.)....142
Biological Laboratory, State, Branch of, at Local Hospital....246
Blachly, Arthur T.—Apparatus for Writing With the Knee (Ab.)..226
Blanchard, R.—Transportation of Wounded Soldiers by Aeroplane (Ab.)....141
Blanchfield, Florence A.—Responsibility of Superintendent for Correct Dietary....373
Blanket Problem, Sanatorium—Rockwood....98
Blind, Chicago Light House for—Williams....203
Blind, Needs and Welfare of—Austin....202
Blind, Vocational Work for, in Massachusetts—Wright....201
Blind, What Illinois is Doing for—Comstock....80
Blindness, Prevention of in Pennsylvania....220
Book Reviews and Books Received for Review 70, 145, 227, 308, 371, 386
Boston Dispensary in Its One Hundredth and Twentieth Year—Davis....303
Boston, Instructive District Nursing Association of—Beard....247
Bott, Edward A.—Educational Work for Soldiers....293, 365
Braisted, William C.—Emergency Hospital Construction for the U. S. Navy....87

Brannick, Catherine—Possibilities of Social Service Work in an Eye Hospital or Dispensary....219
Brazil, Heliotherapy in, First Attempts at—Filho (Ab.)....376
Briggs, L. Vernon—Study of the Problem of the So-Called Defective Delinquent and What Has Been done in Massachusetts (Ab.)..225
British Military Medical Arrangements....294, 368, 444
British Naval Medical Service, Land Transportation in....357
British War Hospitals, Economy in....397
Brocq, L.—Plan to Create Syphilis Dispensaries in Paris (Ab.)....376
Brown, John Young—Hospital Organization and Efficiency....428
Buckley, Katharine, and Howell, Thomas—Hospitals and Workmen's Compensation....234
Buffalo, Health Centers of City of....436
Bullet Detector, Electric....309
Burdick Heat Applicators....384
Burke Foundation, Food Economies at—Wright....20
Burlington County (N. J.) Colony for the Feeble-Minded....30
Burns, Dressing for (Parresine), and Method of Its Scientific Application....147
Butler, Charles—Rockefeller Institute War Demonstration Hospital. 73
Buttermilk and Milk Cooler....309
Buying in War Time (Hint)....462
Buying Problem in War Time (Ed.)....188

C

Cacace, E.—First Spanish Institute for the Protection of Infants, and Its Program (Ab.)....69
Cafeteria Service for Tuberculosis Patients—Chadwick and Smith..403
California Sanatorium, Economical Features of—Klotz (Corr.)....453
Camel Transport for the Wounded....213
Cameron, Reba G.—How a State Hospital Helps Uncle Sam....370
Camps to be Made Hospitals....296
Camus, J. and Riche, O.—Special Center for the Examination and Complementary Treatments of Discharged Wounded Soldiers (Ab.).141
Canada, Country Hospitals for....312
Canadian Government, Hospital Cars for—Bennett....32
Canadian Soldiers, Wounded, Rehabilitation of....212, 292, 365
Canning in the Hospital (Hint)....151
Canton Medical Missionary Union (Ab.)....449
Cantonment Hospitals....296
Cardiac Clinics—Ferguson (Ab.)....143
Carhart, William Merle D'Aubigne—New York Children's Eye Clinics....171
"Carit" Tuberculosis Sanatorium (Ab.)....376
Carrel Hospital at Compiegne, and Treatment of War Wounds—Cherubini (Ab.)....450
Cars, Hospital: see also Train, Hospital.
Cars, Hospital, for the Canadian Government—Bennett....32
Carving, Dainty, Skillful, as a Hospital Economy (Hint)....151
Case Records in Hospitals, Value of—Codman....426
Catania, University of, Neuropathological Division for Soldiers—D'Abundo (Ab.)....68
Causes of Tuberculosis—Cobbett (Bk. Rev.)....386
Celery Extract—Street....17
Chadwick, Henry D., and Smith, Herbert W.—Cafeteria Service for Tuberculosis Patients....403
Chapin, Henry Dwight—Systematized Boarding out Versus Institutional Care for Infants and Young Children (Ab.)....377
Chapman, Frank E.—Welcome to Cleveland....196
Cherubini, L.—Carrel Hospital at Compiegne and Treatment of War Wounds (Ab.)....450
Chicago Light House for the Blind—Williams....203
Chicago to have Reconstruction Hospital....296
Children, Mentally Deficient, Their Treatment and Training—Shuttleworth (Bk. Rev.)....145
Children, Out-Patient Work With, Suggested Improvement for—McLean (Ab.)....450
Children's Eye Clinics, New York—Carhart....171
Children's Hospital, Department of Preventive Medicine in—Dorwarth (Ab.)....291
Children's Hospital, First, in Norway (Ab.)....141
Children's Hospital of Philadelphia, Public Health Work of—Dorwarth....242
Children's Hospitals: see also Foundling Hospitals.
China, Hospital Standardization in....460
China, Men Nurses in....23
Chinese, Kuling Tuberculosis Sanatorium for (Ab.)....377
Chinese of American Church Mission, Shanghai, St. Luke's Hospital for (Ab.)....142
Chloramine-T Paste in Treatment of Wounds (Ab.)....227
Christian, Henry A.—Modern Hospital—Its Form, Function, and Work (Ab.)....143
Cincinnati's Successful Antituberculosis Campaign—Dinwiddie....400
Cinnamon Extract—Street....17
City Hospitals: see Municipal Hospitals.
Civilian Hospital, Reorganization of on War Basis—Smith....262
Cleveland, American Hospital Association Meeting in: see American Hospital Association.
Cleveland, Dietitians Meet in....446
Cleveland Foundation....196
Cleveland Hospital Council....196
Cleveland, Hospitals of....196
Cleveland State Hospital....200
Climatic Military Institute of the Red Cross, First, Opened at Berggeil (Ab.)....67
Clinical Laboratory of Albany Hospital—Graham....158
Clinics and Visiting Nursing—Haag....356
Clove Extract—Street....17
Cobbett, Louise—Causes of Tuberculosis (Bk. Rev.)....386
Codman, E. A.—Value of Case Records in Hospitals....426
Cohn, Eugene—Guiding Principles in Institutional Life....460
College-Trained Woman and the National Crisis....31
Colorado Fuel and Iron Company Retirement Plan....222
Colored Pupil Nurses (Q. and A.)....72
Colored Pupil Nurses—Richardson (Corr.)....230
Columbia War Hospital—Wood....112
Compiegne, Carrel Hospital at, and Treatment of War Wounds—Cherubini (Ab.)....450
Compresses: see Surgical Dressings.
Comstock, Charles E.—What the State of Illinois is Doing for Its Blind....80
Connell Gas-Oxygen-Ether Apparatus....228
Connecticut Association of Dietitians Meets....449
Construction, Hospital, Today (Q. and A.)....379
Contagious Disease Hospital for Immigrants at Ellis Island, N. Y.—Wilson....314
Cooley Farms, Cleveland....200
Cooper, Lenna Frances—How the Dietitian Can Help You....139
Copenhagen, Denmark, Pioneer Institution in for Reconstructing the Cripple—Monrad (Ab.)....450
Costs, Hospital: see Accounting.
Cotton and Gauze, Used, Reclaiming—Test.... 22
County Hospitals: see also Tuberculosis Sanatoriums.
Addison County Hospital, Middlebury, Vt.—Walker....240
Courtesy in Front Office (Hint)....462
Cozzolino, Signora—Urgent Need of Establishing Heliotherapeutic Institutes and Stations for Ambulatory Treatment of Osseous, Glandular, and Incipient Pulmonary Tuberculosis (Ab.)....450
Cripple, Reconstructing; Pioneer Institution in Copenhagen, Denmark—Monrad (Ab.)....450
Crippled Soldiers, Vocational Reeducation of....124
Cripples in Industry, Placing—Rigby....417
Crutch, Adjustable....228
Cummings, Ruth K.—Well-Planned County Tuberculosis Hospital...406
Current Hospital Literature....27, 141, 224, 376, 449

D

D'Abundo—Neuropathological Division for Soldiers of the Clinic for Nervous and Mental Diseases of the University of Catania (Ab.) 68
Dakin, H. D., and Dunham, E. K.—Halazone for the Sterilization of Water (Ab.)....227
Davis, Michael M.—Boston Dispensary in Its One Hundred and Twentieth Year....303
Dispensary as a Factor in Public Health Work (Ed.)....268
Dawson, William J. G.—Sonoma State Home for Feeble-Minded and Epileptics 14
DeSouza, O.—Hotel Sanatoriums and Tuberculosis Sanatoriums for Patients in Region of Itatiaya (Ab.)....376
Defective Delinquent, So-Called, Study of Problem of, and What Has Been Done in Massachusetts—Briggs (Ab.)....225
Dental X-Ray Film Holder—Dorr.... 71
Diagnostic Clinic, San Diego—Pollock....251
Diet Kitchen, Equipping....: see Kitchen.... 89
Diet Kitchens of Tuberculosis Department of San Francisco Hospital—Abbott....447
Dietary, Correct, Responsibility of Superintendent for—Blanchfield..373
Dietetics, Department of....60, 139, 217, 300, 373, 446
Dietitian, Scope of Duties of—Cooper....139
Dietitians, Conference of....300
Dietitians, Connecticut Association of, Meets....449
Dietitians Meet at Cleveland....446
Dining Rooms, Children's (Q. and A.)....379
Dinwiddie, Courtenay—Cincinnati's Successful Antituberculosis Campaign....400
Disabled Soldiers, Future of....124
Dispensary and Out-Patient Work....223, 303
Dispensary as Factor in Public Health Work—Davis (Ed.)....268
Dispensary, Boston, In Its One Hundred and Twentieth Year—Davis....303
Dispensary, Function of—Ransom....223
Dispensary, Volunteer Workers in....144
Dori, L.—Hospital Care in the Province of Pavia (Ab.)....226
Dorr Dental X-Ray Film Holder.... 71
Dorwarth, Charles V.—The Public Health Work of a Children's Hospital....242
Dressing Table, Baby, Folding....385
Dressings: see Surgical Dressings.
Dumarest, F., and Vigne, A.—Work Cure in a People's Sanatorium (Ab.)....142
Dunham, E. K., and Dakin, H. D.—Halazone for the Sterilization of Water (Ab.)....227
Dunott, D. Z.—Maryland State Hospital Train....101

E

Earnings, Investment of (Hint)....151
Eaton, W. E.—Conversion of Yachts into Ambulance Boats.... 81
Economies, Institutional, for War Time.... 20
Economies, War-Time....130
Economy, Another Problem in....230
Economy, Methods to Insure (Ed.)....353
Editorials....25, 116, 184, 268, 350, 418
Educating a Community (Q. and A.)....379
Electric Light Switch (Q. and A.).... 72
Ellis Island, N. Y., Contagious Disease Hospital for Immigrants at—Wilson....314
Emma Children's Hospital in Amsterdam, New Division for Babies in—Schippers (Ab.)....377
Emory University, James J. Gray Clinic of—Hinton and Hentz....177
English Hospitals, Americanizing (Ed.)....118
English-Italian Phrase Book for Social Workers—Waller (Bk. Rev.).308
Epileptics and Feeble-Minded, Sonoma State Home for—Dawson.... 14
Epileptics, Industrial Training for at Monson State Hospital—Flood. 33
Epileptics, Institutional Care of—Shanahan.... 10
Equipment, Hospital, and Surgical Instruments, Scarcity of—Mueller 90
Eugenics, Father of—Mendel....207
Extracts, Flavoring: see Flavoring Extracts.
Eye Clinic, Prison—Farley (Ab.)....224
Eye Hospitals and Dispensaries—
Government's Work in Eradication of Trachoma—McMullen....163
Herman Knapp Memorial Eye Hospital, New York City—Knapp..163
New York Children's Eye Clinics—Carhart....171
Eye Hospital or Dispensary, Possibilities of Social Service Work in—Brannick....219

F

Fabella, J., and Hernandez, A.—Treatment of Pulmonary Tuberculosis in the San Juan del Monte Sanatorium (Ab.)....141

Family as Unit of Public Health Work—Beard 247
A Correction—Beard (Corr.) 454
Farley, Frederika—Prison Eye Clinic (Ab.) 224
Feeble-Minded: see also Morons.
Feeble-Minded and Epileptics, Sonoma State Home for—Dawson ... 14
Feeble-Minded in Court 56
Feeble-Minded in Industry—Rossy 294
Feeble-Minded, Industrial Training for 358
Feeble-Minded, New Jersey, Colonies for 30
Feeble-Minded, New York State, Colonies for 28
Feeble-Minded, New York, Institutional Care for 23
Feeble-Minded, State Care for—Murdoch 12
Ferguson, J. S.—Cardiac Clinics (Ab.) 143
Fesevur, H. J.—Plan of Pavilion for Infectious Diseases for Town of About 30,000 Inhabitants (Ab.) 450
Field Hospital Presented to the Russian Army by France (Ab.) 68
Fighting, Actual, Preparedness for (Ed.) 271
Filho, A. Moncorvo—First Attempts at Heliotherapy in Brazil (Ab.) .376
Fiorani, P. L.—Management of Hospital Trains (Ab) 67
Fire, Prevention of, in Hospital Buildings—Porter 333
Flamini, M.—Reform of Foundling Hospitals (Ab.) 377
Flavoring Extracts, Their Character and Composition—Street 15
Flood, Everett—Industrial Training for Epileptics 33
Flower Hospital—No-Waste Bulletin 130
Food Boxes, Heated, of Philadelphia General Hospital—Wallace 301
Food, Conservation of: see also under Economy.
Food, Conservation of—Wesener and Teller 60, 140, 218, 300, 374
Food Conservation, Method of 217
Food Debris, Sterilization of in Isolation Hospital—Matteson (Corr.) .454
Food Production on State Hospital Farms (Ed.)—Hurd 24
Food Tables, Basic Quantity, to be Used in Determining Daily Issue of Food to Kitchen (Bk. Rev.) 308
Food Truck, Electrically Heated, of Massachusetts General Hospital—Howland 301
Food, Waste of, Printed Form to Prevent—Summersgill (Corr.) 380
Foster, J. H.—Social Hygiene in the Army During War Time 65
Foundling Hospitals, Reform of—Flamini (Ab.) 377
Fox, Elizabeth G.—1917 Annual Meeting of National Organization for Public Health Nursing 132
Fractures of Legs, Splints for 71
France, Military Hospitals in, Controlled by Women 332
Frazer, B. F.—Industrial Occupation and Recreation Among the Insane (Ab.) 69
French-English Military Medical Glossary—Plumon (Bk. Rev.) 70
French Military Hospital Ships 317
French War Hospital System 120
Fuel, Oil as, in Institutions—Peters 328
Fumigato, A Permanganate of Potash Substitute for Fumigation 457

G

Gas-Oxygen-Ether Apparatus, Connell 228
Gasoline for Cleansing Wounds—Morton 231
Gassette, Grace, War Orthopedic Work of—Lester 92
Gauze: see also Surgical Dressings.
Gauze and Cotton, Reclaiming of—Test 22
General Hospital and Syphilis 266
Genito-Urinary Table 149
Geyser Electric Water Heater 150
Gibney, Virgil P.—War Economies in Surgical Supplies 21
Ginger Extract—Street 17
Goldwater, S. S., and Walker, Harry Leslie—Henry W. Putnam Memorial Hospital, Bennington, Vt. 1
Goodrich, Annie W., Trained Nurse 431
Graham, Clarence F.—Clinical Laboratory of Albany Hospital 158
Grape Juice, Lime Juice, and Loganberry Juice—Street 96
Greene, Frederick D.—Hospital Publicity as Means of Education and Support 336
Greene, Frederick D., Warner, A. R., and McEachern, Malcolm T.—Report of Committee on Accounting 355
Guy's Hospital School of Massage 122
Gynecological Clinic of University of Munich, New (Ab.) 143

H

Haag, Mary Elizabeth—Clinics and Visiting Nursing 356
Hadden, G.—Registration of Out-Patients (Ab.) 377
Haemacytometer, Thoma—Levy 457
Halazone for Sterilization of Water—Dakin, H. D., and Dunham, E. K. (Ab.) 227
Handicapped, Occupations for: see Blind; Crippled; Feeble-Minded; Insane; Soldiers.
Health Centers of City of Buffalo 436
Heat Applicators, Burdick 384
Heater, Hotpoint Hedlite 457
Heliotherapeutic Institutes and Stations for Ambulatory Treatment of Osseous, Glandular, and Incipient Pulmonary Tuberculosis, Urgent Need of Establishing—Cozzolino (Ab.) 450
Heliotherapy in Brazil, First Attempt at—Filho (Ab.) 376
Heliotherapy in Treatment of War Wounds—Magrassi (Ab.) 377
Henry W. Putnam Memorial Hospital, Bennington, Vt.—Walker and Goldwater 1
Hentz, H. F., and Hinton, C. C.—James J. Gray Clinic in Atlanta, Ga. 177
Herman Knapp Memorial Eye Hospital, New York City—Knapp 153
Hernandez, A., and Fabella, J.—Treatment of Pulmonary Tuberculosis in the San Juan del Monte Sanatorium (Ab.) 141
Hill, G. H.—Origin of the Psychopathic Hospital (Ab.) 68
Hinton, C. C., and Hentz, H. F.—James J. Gray Clinic in Atlanta, Ga. 177
Hints for Hospital Superintendents 151, 231, 462
Hoffman Blue Cross Electric Bandage Roller 384
Hopital, No. 32 Bis. (Hopital Francais de New York, Passy par Vernon (Yonne, France,)—Nodine (Ab.) 141
Hornsby, John Allan—Hospital Organization Under the War Department 88
Hornsby, John A.—Hospital Problem of Today—What Is It? 322
Hornsby, John A., and Others—Standardization of Hospitals—
Class I, The University or Teaching Hospital 18, 103
Classes II and III, Semipublic Institutions 180
Class IV, Small Semipublic Hospitals 253
Class V, Small Semipublic Community Hospitals 341
Class VI, Large Municipal Hospitals 409
Hospital Association, Ohio State, Third Annual Meeting of 57
Hospital Buildings, Non-Fireproof, Reducing Hazard to Life in—Porter 333
Hospital, Buyer for—Reid 128
Hospital Buying (Ed.) 119
Hospital Buying, War-Time Foresight in (Ed.) 24
Hospital Care in Province of Pavia—Dori (Ab.) 226
Hospital Cars: see Cars, Hospital; Train, Hospital.
Hospital, Civilian, Reorganization of on War Basis—Smith 262
Hospital Construction: see Architecture, Hospital; Construction, Hospital.
Hospital Construction, Emergency, for U. S. Navy—Braisted 87
Hospital Costs: see Accounting.
Hospital, Educational Responsibility of, to Profession and Community—Kanavel 430
Hospital Finances and the War (Ed.) 350
Hospital Floors: see Floors, Hospital.
Hospital, Medical, and Special Meetings 60
Hospital, Meeting War Stringency in (Ed.) 25
Hospital Needs of Small Community (Ed.) 352
Hospital, Modern—Its Form, Function, and Work—Christian (Ab.) .143
Hospital Organization—Murphy (Ab.) 224
Hospital Organization and Efficiency—Brown 428
Hospital Organization Under the War Department—Hornsby 88
Hospital Plans, Cut-and-Dried (Q. and A.) 146
Hospital Problem of Today—What Is It?—Hornsby 322
Hospital Problems—Littig (Ab.) 225
Hospital Service Flag—Young (Corr.) 453
Hospital Ships: see also Ambulance Boats.
Hospital Ships, French Military 317
Hospital, Small-Town, Some of Bases of Its Success—Phifer 412
Hospital Social Service: see Social Service, Hospital.
Hospital Supplies: see Supplies.
Hospital Trains: see Cars, Hospital; Train, Hospital.
Hospital Without Staff, Flea for—O'Connor (Corr.) 454
Hospitals: see also Cantonment Hospitals; Children's Hospitals; Epileptic, Feeble-Minded, and Insane, Institutions for; Field Hospitals; Foundling Hospitals; Hut Hospitals; Military Hospitals; Orthopedic Hospitals; Psychopathic Hospitals; Reconstruction Hospitals; State Hospitals.
Hospitals, American, Federal Inspection and Control of—Wilson 233
Hospitals and Workmen's Compensation—Howell and Buckley 234
Hospitals, Country, for Canada 312
Hospitals, Individual Descriptions of (with Plans)—
Addison County Hospital, Middlebury, Vt.—Walker 240
Columbia War Hospital—Wood 112
Contagious Disease Hospital for Immigrants, Ellis Island, N. Y.—Wilson 314
Henry W. Putnam Memorial Hospital, Bennington, Vt.—Walker and Goldwater 1
Herman Knapp Memorial Eye Hospital, New York—Knapp 153
Industrial Hospital of Northern Pacific Beneficial Association—Smith 244
Jasper County (Mo.) Tuberculosis Hospital Cummings 406
Massachusetts General Hospital, Private Ward of—Howland 389
New York American Emergency Hospital for the After-Care of Poliomyelitis—Ager 166
Rockefeller Institute War Demonstration Hospital—Butler 73
Hospitals, Need for Enlargement of (Ed.) 187
Hospitals of Rome, Plan for Systematization of Buildings of (Ab.) .376
Hospitals of the South (Ed.) 419
Hospitals, Open-Door (Ed.) 418
Hospitals, Service Flags for (Ed.) 420
Hospitals, Standardization of: see Standardization of Hospitals.
Hospitals, Value of Case Records in—Codman 426
Hotel Sanatoriums and Tuberculosis Sanatoriums in Region of Itatiaya—Souza (Ab.) 376
Hotpoint Hedlite Heater 457
Howell, Thomas, and Buckley, Katherine—Hospitals and Workmen's Compensation 234
Howland, Joseph E.—Massachusetts General Hospital Electrically Heated Food Truck 301
Private Ward of Massachusetts General Hospital 389
Humidity and Ventilation (Hint) 462
Hurd, Henry M.—State Hospitals and Agricultural Preparedness (Ed.) 24
Huron Road Hospital, Cleveland 199
Hut Hospital 131
Hygeia Nursing Bottle 382
Hygiene, Social: see Social Hygiene.

I

Illinois, What the State Is Doing for Its Blind—Comstock 80
Indherred Hospital in Northern Trondhjem District, New Building of—Tandberg (Ab.) 226
Industrial Hospital Plan of Northeastern Hospital of Philadelphia—Lyons 306
Industrial Hospital of Northern Pacific Beneficial Association—Smith 244
Industrial Welfare 62, 221, 306
Industry, Feeble-Minded in—Rossy 204
Infants and Young Children, Systematized Boarding Out Versus Institutional Care for—Chapin (Ab.) 377
Infants, First Spanish Institute for Protection of—Cacace (Ab.) ... 69
Infants, Institutional Care of—Brady (Ab.) 299
Infants, New Division for, in Emma Children's Hospital in Amsterdam—Schippers (Ab.) 377
Infectious Diseases, Plan of Pavilion for, for Town of About 30,000 Inhabitants—Fesevur (Ab.) 450
Insane, Care and Treatment of in County Institutions of Pennsylvania—Sandy (Ab.) 378
Insane, Hospital for, Community Value of Out-Patient Department of—MacDonald (Ab.) 69
Insane in County Poor Farm—Salmon (Ab.) 69
Insane in Japan, Care of—Ishida (Ab.) 376
Insane, Industrial Occupation and Recreation Among—Frazer (Ab.) 69
Insane, Institutionalized 232
Insane, Modern Hospital for from Standpoint of Medical Service—Singer (Ab.) 69
Insane Poor, Protection of—Bignami (Ab.) 142

Inspection and Control, Federal, of American Hospitals—Wilson....233
Institutional Life, Guiding Principles in—Cohn....460
Institutional Physicians, Married, Plea for—Scheffel (Corr.)....230
Institutions, Descriptions of: see Hospitals, Individual, Descriptions of; also under Epileptic; Feeble-Minded; Insane.
Institutions, Recent Ohio Legislation on—Wright....22
Instructive District Nursing Association of Boston—Beard....247
Interns and Medical Students, Danger in Drafting....232
Interns, Government's Policy Toward, Discussion of at American Hospital Association Meeting (Ed.)....184
Ishida, N.—Care of Insane in Japan (Ab.)....376
Isko Refrigerating Unit....456
Isolation Hospital, Sterilization of Food Debris in—Matteson (Corr.)....454
Italian (English-Italian) Phrase Book for Social Workers—Waller (Bk. Rev.)....308

J

James J. Gray Clinic in Atlanta, Ga.—Hinton and Hentz....177
Jamme, Anna C.—Administrative and Legislative Problems in Meeting Modern Demands on the Graduate Nurse....214
Japan, Care of Insane in—Ishida (Ab.)....376
Jasper County (Mo.) Tuberculosis Hospital—Cummings....406
Jewish Home for Chronic Invalids of St. Louis—Kaplan and Simon....459

K

Kanavel, Allen B.—Educational Responsibility of Hospital to Profession and Community....429
Kankakee State Hospital, Official Creed of—Cohn....460
Kansas, Hospitals of, and Kansas Hospital Association—Murdock (Ab.)....225
Kaplan, Elizabeth S., and Simon, Selig—Jewish Home for Chronic Invalids of St. Louis....459
Kirkwood, Frances—Following a Vision of Better Men and Women..221
Kitchen Machine, New....147
Klotz, Walter C.—Economical Features of California Sanatorium (Corr.)....453
Knapp, Arnold—Herman Knapp Memorial Eye Hospital, New York City....153
Kuling Tuberculosis Sanatorium for Chinese (Ab.)....377

L

Labor Turnover in Hospitals (Ed.)....187
Laboratory, Clinical, of Albany Hospital—Graham....158
Lakeside Hospital, Cleveland....198
Lapham, Mary E.—More Knowledge Instead of More Sanatoriums (Corr.)....452
Laundry Work, Better—Warner (Corr.)....135
Laxative Food Preparations and Their Composition—Street....398
Lemon Extract—Street....16
Lester, Fanny B.—Grace Gassette's Work in War Orthopedics....92
Letters to the Editor....135, 230, 380, 452
Letts, W. M.—Screens (Verse)....461
Light and Its Effect on Health....152
Light Treatment, Quartz, Experiences with—Sokolow (Ab.)....449
Lime Juice, Loganberry Juice, and Grape Juice—Street....96
Littig, Lawrence W.—Some Hospital Problems (Ab.)....225
Loganberry Juice, Grape Juice, and Lime Juice—Street....96
Luckiesch, M.—Artificial Daylight in Surgery....311
Lyons, Barrow B.—Industrial Hospital Plan of Northeastern Hospital of Philadelphia....306

M

MacCarthy, Jessie Howell—Where Garments and Americans are Made (Bk. Rev.)....145
McCracken, Elizabeth—Effect of the War on Nursing Situation Abroad....439
Public Health Nursing and the Public....297
MacDonald, John B.—Community Value of the Out-Patient Department of the Hospital for the Insane (Ab.)....69
McDowell, J. R.—Coordination of Tuberculosis Activities in Ohio (Ab.)....450
McEachern, Malcolm T., Greene, Frederick D., and Warner, A. R.—Report of Committee on Accounting....355
McGrath, Catherine C.—Economy in the Cutting of Surgical Dressings....8
McLean, Stafford—Suggested Improvement for Out-Patient Work with Children (Ab.)....450
McMullen, John—Government's Work in the Eradication of Trachoma....163
Magrassi—Heliotherapy in Treatment of War Wounds (Ab.)....377
Marvel, E.—Surgeon's Responsibility to the Economics of the Hospital (Ab.)....68
Maryland State Hospital Train—Dunott....101
Massachusetts, Blind in, Vocational Work for....291
Massachusetts General Hospital Electrically Heated Food Truck—Howland....301
Massachusetts General Hospital, Private Ward of—Howland....389
Massachusetts, Problem of So-Called Defective Delinquent in—Briggs (Ab.)....225
Massage, War Stimulates Work in....122
Matteson, A. A.—Sterilization of Food Debris in Isolation Hospital (Corr.)....454
Mc.: see as if spelled Mac.
Meat, Price of, J. Ogden Armour on Truth About....448
Mechanical Forces, Organization of (Hint)....452
Medical Men in the War (Ed.)....419
Medical Students and Interns, Danger in Drafting....232
Men as Nurses: see Nurses, Men.
Menantico (N. J.) Colony for the Feeble-Minded....30
Mendel's Work on Heredity....297
Mental Hygiene, Demand Which It Makes on Graduate Nurse—Taft....133
Mental Shock and Neurasthenia, Treatment of....368
Mentally Deficient Children, Their Treatment and Training—Shutteworth (Bk. Rev.)....145
Metric System, Advantages of, in Prescribing Arms....174
Military Clinics, Neurological, of University of Catania—D'Abundo (Ab.)....68
Military Hospital System, Fi....120
Military Hospital in France Co... Women....392
Military Hospital, Temporary, Economical Features in Construction of....122
Military Hospitals: see also Orthopedic Hospitals; Reconstruction Hospitals.
Military (Barrack) Hospital, Arrangement and Management of During the War—Steffelaar (Ab.)....449
Military Hospitals, British, Economy in....397
Military Hospitals, Employment of Women in, in Place of Soldiers (Ab.)....67
Military Hospitals, New, Plans for....208
Military Hospitals (with Plans)—
Columbia War Hospital—Wood....112
French Military Hospital System....120
Queen Alexandra's Hospital for Officers....123
Rockefeller Institute War Demonstration Hospital—Butler....73
Military Orthopedic Hospitals, British....294
Milk and Buttermilk Cooler....309
Minnesota Sanatorium Association Meeting....95
"The Modern Hospital" and American Hospital Association, Sir Henry Burdett's Appreciation of....206
Moering Plaster Cutter....382
Monod, R.—Surgical Automobile Ambulance (Ab.)....141
Monrad, Margaret—Reconstructing the Cripple; Pioneer Institution in Copenhagen, Denmark (Ab.)....450
Monson State Hospital, Industrial Training at—Flood....33
Montgomery Ward & Co., Social Service Departments of—Kirkwood..221
Morbidity Statistics, Hospital, Standardization of....183
Morton, I.—Gasoline for Cleansing Wounds (Hint)....231
Moron, Institutional Life of—Wilson....9
Moss, H. J.—Controlling Basis for Economical Use of Supplies....318
Mount Sinai Hospital, Cleveland....196
Mueller, Vincenz—Scarcity of Surgical Instruments and Hospital Equipment....90
Munich, University of, New Gynecological Clinic of (Ab.)....143
Municipal Hospitals—
Henry W. Putnam Memorial Hospital, Bennington, Vt.—Walker and Goldwater....1
Munition Workers, Conservation of Health of....86
Murdoch, J. M.—State Care for the Feeble-Minded....12
Murdock, S.—Hospitals of Kansas and Kansas Hospital Association (Ab.)....225
Murphy, F. G.—Hospital Organization (Ab.)....224

N

Nascher, I. L.—Institutional Care of the Aged....4
Naval Medical Service, British, Land Transportation in....357
Navy Hospital Plans (Ed.)....118
Navy, U. S., Emergency Hospital Constructed for—Braisted....87
Nephelometry....310
Nervous and Mental Diseases Among Soldiers, Clinic of University of Catania for—D'Abundo (Ab.)....68
Neurasthenia and Mental Shock, Treatment of....368
New Instruments and Equipment....71, 147, 228, 309, 382, 456
New York State, Colonization of Social Misfits in....28
New Jersey Colonies for the Feeble-Minded....30
New York American Emergency Hospital for the After-Care of Poliomyelitis—Ager....166
New York Children's Eye Clinics—Carhart....171
New York Hospital for Ruptured and Crippled, Economy in Surgical Supplies at—Gibney....21
New York, Institutional Care for Feeble-Minded in....23
New York State, Tuberculosis Campaign in, and Elsewhere....115
New York State, Tuberculosis Hospitals in....162
New York Telephone Company, Welfare Work of....62
Newton Hospital Helps Meet Demand for More Nurses—Riddle....216
Nodine, Alonzo M.—Hopital Francais de New York, Passy par Vernon (Yonne) France (Ab.)....141
Northeastern Hospital of Philadelphia, Industrial Plan of—Lyons..306
Northern Pacific Beneficial Association, Industrial Hospital of—Smith....244
Norway, First Children's Hospital in (Ab.)....141
Nose and Throat Specialists, Move to Promote Training of—Wishart (Corr.)....453
Nurse, Graduate, Administrative and Legislative Problems in Meeting Modern Demands on—Jamme....214
Nurse, Graduate, Demand Which Mental Hygiene Makes Upon—Taft....133
Nurse, Trained—Goodrich....431
Nurse-Midwife....59
Nursery Maids, Hospital-Trained, Demand for (Q. and A.)....451
Nurses, Colored Pupil (Q. and A.)....72
Nurses, Colored Pupil, Re-Richardson (Corr.)....230
Nurses, Increase in Supply of by Small Hospital—Riddle....216
Nurses, Men, in China....23
Nurses, More Trained, Call for (Ed.)....118
Nurses, Official Uniform for (Q. and A.)....452
Nurses, Pupil, Saving Steps of....100
Nurses, Trained, Movement to Increase Number of....298
Nurses, Training College Women for....31
Nurses' Training, Relation of to Great War—Baer....129
Nursing Bottle, Hygeia....382
Nursing Course, Red Cross Home....131
Nursing, Department of....34, 132, 214, 297, 362, 439
Nursing Resources, Survey of....127
Nursing School Records: See Training School Records.
Nursing Situation Abroad, Effect of War on McCracken....439
Nursing, War, College-Trained Women for....31

O

Occupation and Recreation, Industrial, Among the Insane—Frazer (Ab.)....69
Occupational Experts, Training Course for—Upham....458
O'Connor, John J.—Plea for Hospital Without Staff (Corr.)....454
Ohio, Coordination of Tuberculosis Activities in—McDowell (Ab.)...450
Ohio Council of National Defense, Work of....296
Ohio Legislation, Recent, on Institutions—Wright....22
Ohio State Hospital Association, Third Annual Meeting of....57
Ohio to Study Problems of Hospitals, Medical Licensure, and Education....56
Oil as Fuel in Institutions—Peters....328

Old Persons: see Aged.
Oleomargarine 246
Operating Room, White—Secor 170
Ophthalmic Hospitals and Dispensaries: see Eye Clinics and Dispensaries.
Orange Extract Street 17
Orthopedic Hospitals: see also Reconstruction Hospitals.
Orthopedic Hospitals, British Military 294
Orthopedic Hospitals—
New York American Emergency Hospital for the After-Care of Poliomyelitis—Ager 166
Orthopedics, War, Grace Gassette's Work in—Lester 92
Out-Patient Department of Hospital for Insane, Community Value of—MacDonald (Ab.) 69
Out-Patient Work with Children, Suggested Improvement for—McLean (Ab.) 450
Out-Patients, Registration of—Hadden (Ab.) 377

P

Painting, Prepare to Do Some (Hint) 462
Paraffine Atomizer, Electrically Heated 309
Paris, Tuberculosis Hospitals in 321
Parresine Dressing for Burns, and Method of Its Scientific Application 147
Pathologist, Salary of (Q. and A.) 146
Pavia, Province of, Hospital Care in—Dori (Ab.) 226
Pennsylvania, Care and Treatment of Insane in County Institutions of—Sandy (Ab.) 378
Pennsylvania, Prevention of Blindness in 220
Peppermint Extract—Street 17
Permanganate of Potash Substitute for Fumigation, Fumigato 457
Peters, John M.—Oil as Fuel in Institutions 328
Pfefferkorn, Blanche—Teaching of Bacteriology in Schools for Nurses 362
Phifer, Margaret Giffen—Small-Town Hospital Some of Bases of Its Success 412
Philadelphia, Children's Hospital of, Public Health Work of—Dorwarth 242
Philadelphia General Hospital Heated Food Boxes—Wallace 301
Picture Takers Pretending to Represent THE MODERN HOSPITAL, Warning Against 272
Plaster-of-Paris Saw, Motor-Driven 229
Plaster Cutter, Moering 382
Plumon, Eugene—Vade-Mecum for the Use of Officers and Interpreters in the Present Campaign (Bk. Rev.) 70
Poliomyelitis, New York American Emergency Hospital for After-Care of—Ager 166
Pollock, Robert—San Diego Group Diagnostic Clinic 251
Poor Farm, County, Insane in—Salmon (Ab.) 68
Poor House, The (verse)—Teasdale 27
Poorhouse Administration, Standards of—Bardwell 393
Porter, H. F.—Reducing the Hazard to Life in Non-Fireproof Hospital Buildings 333
Practice of Mobilized Physicians Gratuitously Cared for by Colleague (Ed.) 353
Preparedness, Wise, Another Feature of (Ed.) 185
Presbyterian Hospital, Chicago, Cooperation of Physicians, Nurses, and Patients Enlisted Successfully for Food Economy—Bacon ... 21
Prevention of Blindness—Maternity 219
Preventive Medicine, Department of in Children's Hospital—Dorwarth (Ab.) 291
Prison Eye Clinic—Farley (Ab.) 224
Prison System, Place of Psychiatric Clinic in 250
Prisoners, War, Hospitalization of 375
Psychiatric Clinic, Place of in Prison System 250
Psychiatric Services of the War—Alberti (Ab.) 450
Psychopathic Hospital, Origin of—Hill (Ab.) 68
Public Health Nursing and the Public McCracken 297
Public Health Nursing, 1917 Annual Meeting of National Organization for—Fox 132
Public Health Service, United States, War Program of 292
Public Health Work, Dispensary as Factor in—Davis (Ed.) 268
Public Health Work, Family as Unit of—Beard 247
A Correction—Beard (Corr.) 454
Public Health Work of the Children's Hospital of Philadelphia—Dorwarth 242
Publicity, Hospital, as Means of Education and Support—Greene ... 336
Publicity in Hospital Matters 173
Publicity in the Hospital (Ed.) 351

Q

Quartz Light Treatment, Experiences With—Sokolow (Ab.) 449
Quayle, John H.—Reclamation of Rejected Candidate for Army 415
Queen Alexandra's Hospital for Officers 122
Queries and Answers 72, 146, 379, 451

R

R. U. V. Ultra-Violet Sterilizer 148
Railroad Hospital—
Industrial Hospital of Northern Pacific Beneficial Association—Smith 244
Ransom, John E.—Function of a Dispensary 223
Ravenel, Mazyck P.—Prophylaxis of Venereal Disease (Ab.) 142
Recommendations, Demand Good (Hint) 151
Reconstruction Hospital, First Red Cross, in This Country 208
Reconstruction Hospital for Chicago 296
Reconstruction Hospitals for Prospective Recruits 128
Records, Case, Value of in Hospitals—Codman 426
Records, Training School: see Training School Records.
Recruits, Sex Hygiene Exhibit for 138
Red Cross, First Climatic Military Institute of Opened at Berggeggi (Ab.) 67
Red Cross Home Nursing Courses 131
Red Cross, News Service of 27
Red Cross "Reconstruction Hospital," First, in this Country 208
Red Cross Society in Great Britain 444
Refrigerating Unit, Isko 456
Reid, M. L.—Buyer for the Hospital 128
Richardson, F. Belle—Colored Pupil Nurses (Corr.) 230
Riche, O., and Camus, J.—Special Center for the Examination and Complementary Treatment of Discharged and Wounded Soldiers (Ab.) 141
Richmond, Mary E.—Social Diagnosis (Bk. Rev.) 308
Riddle, Mary M.—How One of the Smaller Hospitals Hopes to Help Meet the Need for More Nurses 216
Rigby, Elfrida—Placing Cripples in Industry 417
Rockefeller Institute War Demonstration Hospital—Butler 73
Rockwood, H. L.—Sanatorium Blanket Problem 98
Roentgen-Ray Film Holder, Dorr Dental 71
Rogers, Allen—The Chemistry of Modern Washing 267
Rome, Hospitals of, Plan for Systematization of Buildings of (Ab.) 376
Rome (N. Y.) State Custodial Asylum for Feeble-Minded, Colonies of 28
Rose Extract—Street 17
Rossy, C. S.—Feeble-Minded in Industry 204
Russian Army, Field Hospital Presented to by France (Ab.) 68

S

Saccharine, Use of, in Hospital Pharmacies (Ab.) 227
St. Anthony Hospital, Carroll, Iowa, has State University Branch Laboratory 246
St. John Ambulance Brigade Hospital, Etaples, France 126
St. John Ambulance Hospital, Southport, England 368
St. John's Hospital, Cleveland 200
St. Louis Jewish Home for Chronic Invalids of—Kaplan and Simon .. 459
St. Luke's Hospital of Methodist Episcopal Church, Cleveland 198
St. Luke's Hospital for Chinese of American Church Mission, Shanghai (Ab.) 142
St. Vincent Charity Hospital, Cleveland 200
Salmon, Thomas W.—Insane in a County Poor Farm (Ab.) 68
Salt Solution, Standard Normal (Q. and A.) 452
San Diego Group Diagnostic Clinic—Pollock 251
San Francisco Hospital, Tuberculosis Department of from Dietiman's Point of View—Abbott 447
San Juan del Monte Sanatorium, Treatment of Pulmonary Tuberculosis in—Fabella and Hernandez (Ab.) 141
Sanatorium Association Meeting, Minnesota 95
Sanatorium Blanket Problem Rockwood 98
Sandy, William C.—Care and Treatment of Insane in County Institutions of Pennsylvania (Ab.) 377
Sarco Temperature Regulator 383
Saw, Motor-Driven Plaster-of-Paris 229
Scarburgh, R. S.—Welfare Work of the New York Telephone Co ... 62
Scheffel, Carl—Plea for Married Institutional Physicians (Corr.) ... 230
Schippers, J. C.—New Division for Babies in Emma Children's Hospital in Amsterdam (Ab.) 377
Screens—Letts (Verse) 461
Scripps Memorial Foundation of San Diego Pollock 251
Secor, William Lee—White Operating Room 170
Service Flag, Hospital Young (Corr.) 453
Service Flags for Hospitals (Ed.) 420
Sex Hygiene Exhibit for Recruits 138
Sforza, N.—Tuberculosis in the War (Ab.) 68
Shanahan, William T.—Institutional Care of Epileptics 10
Ships, Hospital: see also Ambulance Boats.
Ships, Hospital, French Military 317
Shutt, Cleveland H.—Municipal Training Schools for Nurses 354
Shuttleworth, G. E.—Mentally Deficient Children, Their Treatment and Training (Bk. Rev.) 145
Simon, Selig, and Kaplan, Elizabeth S.—Jewish Home for Chronic Invalids of St. Louis 459
Singer, H. D.—Modern Hospital for the Insane From the Standpoint of Medical Service (Ab.) 69
"Sister" Nurses in British Hospitals 144
Small-Town Hospital—Some Bases of Its Success—Phifer 412
Smith, H. B.—Industrial Hospital Managed by Employees 244
Smith, Herbert W., and Chadwick, Henry D.—Cafeteria Service for Tuberculosis Patients 403
Smith, Winford H.—Reorganization of the Civilian Hospitals on a War Basis 262
Soap and Time, Saving of 266
Soap, Laundry, as Substitute for Scrubbing Soaps (Hint) 151
Social Diagnosis—Richmond (Bk. Rev.) 308
Social Hygiene in the Army During War Time—Foster 65
Social Hygiene—Venereal Diseases 65
Social Service Work in an Eye Hospital or Dispensary, Possibilities of—Brannick 219
Social Workers, English-Italian Phrase Book for—Waller (Bk. Rev.) 308
Sokolow, P.—Experience With the Quartz Light Treatment (Ab.) ... 449
Soldiers at the Front, Bathing Facilities for 209
Soldiers, Crippled, Vocational Reeducation of 124
Soldiers' Dependents, Care of 372
Soldiers, Discharged Wounded, Special Center for Examination and Complementary Treatment of—Camus and Riche (Ab.) 141
Soldiers, Educational Work for—Bott 293
Soldiers, Wounded Canadian, Rehabilitation of 212, 292, 365
Soldiers, Wounded, Transportation of by Aeroplane—Blanchard (Ab.) 141
South, Hospitals of (Ed.) 419
Spanish Institute for the Protection of Infants, First—Cacace (Ab.). 69
Spearmint Extract—Street 17
Splint for Fractures of Legs 71
Sponges: see also Surgical Dressings.
St.; see as if spelled Saint.
Standardization of Hospital Morbidity Statistics 183
Standardization of Hospitals (Ed.) 350
Standardization of Hospitals by Self-Marking (Ed.) 185
Standardization of Hospitals—Fixing of Standards (Ed.) 418
Standardization of Hospitals, General Committee of American College of Surgeons on 426
Standardization of Hospitals—Hornsby and Others—
Class I, The University or Teaching Hospital 18, 103
Classes II and III, Semipublic Institutions 180
Class IV, Small Semipublic Hospitals 253
Class V, Small Semipublic Community Hospitals 341
Class VI, Large Municipal Hospitals 409
Standardization of Hospitals in China 460
Standardization of Hospitals, Session of American College of Surgeons on 183, 311, 421

State Hospitals and Agricultural Preparedness—Hurd (Ed.)..... 24
Statistics, Morbidity, of Hospitals, Standardization of.....183
Steffelaar, M.—Arrangement and Management of Large Barrack Hospital During the War (Ab.).....449
Sterilizer, R. U. V. Ultra-Violet.....148
Stewart, L. F.—Ambulance of the American Hospital of Paris as Seen by a Surgeon (Ab.)..... 67
Street, John Phillips—Flavoring Extracts, Their Character and Composition 15
Grape Juice, Lime Juice, and Loganberry Juice..... 96
Laxative Food Preparations and Their Composition.....398
Summersgill, H. T.—Printed Forms to Prevent Waste of Food (Corr.) 380
Sunlight and Hospital Architecture—van Walsem (Ab.).....376
Superintendents, Demand for Higher Grade (Hint).....462
Supplies, Economical Use of, Controlling Basis for—Moss.....318
Supplies, Hospital, Discussion of at American Hospital Association Meeting (Ed.) 184
Surgeon's Responsibility in the Economics of the Hospital—Marvel (Ab.) 68
Surgery, Artificial Daylight in—Luckiesch..... 311
Surgical Dressings, Economy in Cutting of—McGrath..... 8
Surgical Dressings, Reclaiming of—Test..... 22
Surgical Instruments and Hospital Equipment, Scarcity of—Mueller. 90
Surgical Supplies, Economy in at New York Hospital for Ruptured and Crippled—Gibney 21
Switch, Electric Light (Q. and A.)..... 72
Switzerland, Hospitalization of War Prisoners in.....375
Syphilis and the General Hospital.....266
Syphilis Dispensaries in Paris, Plan for—Brocq (Ab.).....376
Syringes, Asepto 382

T

Taft, Jessie—Demand Which Mental Hygiene Makes Upon the Graduate Nurse 133
Tandberg, O.—New Building of Indhered Hospital in the Northern Trondhjem District (Ab.).....226
Taunton State Hospital, War Relief Work of—Cameron.....370
Teasdale, Sara—The Poor House (verse)..... 27
Telephone Company, New York, Welfare Work of..... 62
Teller, George L., and Wesener, J. A.—Conservation of Food 60, 140, 218, 300, 374
Temperature Regulator, Sarco.....383
Test, Daniel D.—Reclaiming Used Gauze and Cotton..... 22
Thoma-Levy Haemacytometer 457
Throat and Nose Specialists, Move to Promote Training of—Wishart (Corr.) 453
Trachoma, Government's Work in Eradication of—McMullen.....163
Train, Hospital: see also Cars, Hospital.
Train, Hospital, Maryland State—Dunott.....101
Training School Records—Bell 34
Training School Records, Uniform (Ed.)..... 26
Training Schools for Nurses, Municipal—Shutt.....354
Training Schools, Teaching of Bacteriology in—Pfefferkorn.....362
Training Schools, Young Women for (Hint).....462
Trains, Hospital, Management of—Fiorani (Ab.)..... 67
Tuberculosis Activities in Ohio, Coordination of—McDowell (Ab.)...450
Tuberculosis, Campaign Against in Cincinnati—Dinwiddie.....400
Tuberculosis Campaign in New York State and Elsewhere.....115
Tuberculosis, Causes of—Cobbett (Bk. Rev.).....386
Tuberculosis Department of San Francisco Hospital From the Dietitian's Point of View—Abbott.....447
Tuberculosis Hospitals—
Barlow Sanatorium (Economical Features of a California Sanatorium)—Klotz (Corr.) 453
Jasper County (Mo.) Tuberculosis Hospital—Cummings.....406
Jewish Home for Chronic Invalids of St. Louis—Kaplan and Simon.459
Tuberculosis Hospitals in New York State.....162
Tuberculosis Hospitals in Paris.....321
Tuberculosis in the War—Sforza (Ab.)..... 68
Tuberculosis, Need of Knowledge of Rather than Sanatoriums—Lapham (Corr.) 452
Tuberculosis, Osseous, Glandular, and Incipient Pulmonary, Urgent Need of Establishing Heliotherapeutic Institutes and Stations for Ambulatory Treatment of—Cozzolino (Ab.).....450
Tuberculosis Patients, Cafeteria Service for—Chadwick and Smith..403
Tuberculosis, Pulmonary, Treatment of in San Juan del Monte Sanatorium—Fabella and Hernandez (Ab.).....141
Tuberculosis Sanatorium, "Carit" (Ab.).....376
Tuberculosis Sanatorium, First, Opening of at Brassono (Ab.).....226
Tuberculosis Sanatorium for Chinese, Kuling (Ab.).....377
Tuberculosis Sanatoriums and Hotel Sanatoriums in Region of Itatiaya—Souza (Ab.) 376
Tuberculosis Sanatoriums, County, Opportunities and Needs of.....239
Tuberculosis, What Ohio is Doing Against.....387
Tuberculosis Work in a Small City.....207

U

U. S. Navy, Emergency Hospital Construction for—Braisted..... 87
Ultra-Violet Sterilizer, R. U. V.....148
Upham, Elizabeth G.—Training Course for Occupational Experts. 458
Urine, New Instruments for Testing Acidity and Presence of Albumin in 149

V

Vacations, Policy of Giving (Q. and A.).....146
Vade-Mecum for Use of Officers and Interpreters in Present Campaign—Plumon (Bk. Rev.)..... 70
Van Walsem, C.—Sunlight and Hospital Architecture (Ab.).....376
Van Walsem, G. C.—Window of the Bedroom (Ab.).....226
Vancouver General Hospital News..... 54
Vanilla Extract—Street 15
Vegetable Paring Machines, Victoria.....383
Venereal Diseases, Prophylaxis of—Ravenel (Ab.).....142
Ventilation and Humidity (Hint).....462
Victoria Vegetable Paring Machines.....383
Vigne, A., and Dumarest, F.—Work Cure in a People's Sanatorium (Ab.) 142
Visiting Nursing and Clinics—Haag.....356

W

Walker, Harry Leslie—Addison County Hospital, Middlebury, Vt....240
Walker, Harry Leslie, and Goldwater S. S.—Henry W. Putnam Memorial Hospital, Bennington, Vt..... 1
Wallace, Henen L.—Philadelphia General Hospital Heated Food Boxes.301
Waller, Edith—English-Italian Phrase Book for Social Workers and Physicians' Supplement (Bk. Rev.).....308
War: see also Army.
War, The (Ed.).....116
War and the Hospitals (Ed.).....270
War Books 371
War Demonstration Hospital, Rockefeller Institute—Butler..... 73
War Department, Hospital Organization Under—Hornsby..... 88
War Department, Huge Task of Preparation Faced by.....125
War, Effect of on Nursing Situation Abroad—McCracken.....439
War, Great, Relation of Nurses' Training to—Baer.....129
War Hospitals: see Military Hospitals.
War, The—Its Hospital, Medical, and Nursing Aspects..208, 292, 365, 442
War, Medical Men in (Ed.).....419
War Number, Special (Ed.).....119
War Nursing, College-Trained Women for..... 31
War Orthopedics, Grace Gassette's Work in—Lester..... 92
War Prices Versus Waste (Ed.).....420
War Prisoners, Hospitalization of, in Switzerland.....375
War, Psychiatric Service of—Alberti (Ab.).....450
War Relief Work of Taunton State Hospital—Cameron.....370
War Stimulates Work in Massage.....122
War This Month (Ed.).....270
War Time, Institutional Economies for..... 20
War, Tuberculosis in—Sforza (Ab.)..... 68
War Wounds, Heliotherapy in Treatment of—Magrassi (Ab.).....377
War Wounds, Treatment of, and Carrel Hospital at Compiegne—Cherubini (Ab.) 450
Warner, A. R.—For Better Laundry Work (Corr.).....135
Warner, A. R., Greene, Frederick D., and McEachern, Malcolm T.—Report of Committee on Accounting.....355
Washing, Modern, Chemistry of—Rogers.....267
Waste-Paper Profits (Q. and A.).....146
Water Heater, Geyser Electric.....150
Water, Sterilization of, Halazone for—Dakin and Dunham (Ab.)....227
Wesener, J. A., and Teller, George L.—Conservation of Food 60, 140, 218, 300, 374
West Virginia State Hospital Association, Meeting of.....357
West Virginia Hospital Association, a Correction.....461
Where Garments and Americans Are Made—MacCarthy (Bk. Rev.)..145
Williams, Anna E.—Story of the Light House.....203
Wilson, J. G.—Contagious Disease Hospital for Immigrants at Ellis Island, N. Y.....314
Wilson, R. P. C.—Institutional Care of the Moron..... 9
Wilson, Robert J.—Federal Inspection and Control of American Hospitals 233
Window, New Hospital..... 71
Window Shades, Best (Q. and A.)..... 45
Wintergreen Extract—Street 17
Wishart, D. J. Gibb—Move to Promote Training of Nose and Throat Specialists (Corr.) 453
Women, Employment of, in the Military Hospitals in Place of Soldiers (Ab.) 67
Wood, Francis Carter—Columbia War Hospital.....112
Work Cure in People's Sanatorium—Dumarest and Vigne (Ab.)....142
Workmen's Compensation and Hospitals—Howell and Buckley.....234
Wounded, Camel Transport for 213
Wounded, Transportation and Care of, at Front.....442
Wounds, Gasoline for Cleansing—Morton.....231
Wounds, Treatment of—Chloramine-T Paste in.....227
Wounds, War, Heliotherapy in Treatment of –Magrassi (Ab.).....377
Wright, Howell—Recent Ohio Legislation on Institutions..... 22
Wright, Lucy—Vocational Work for the Blind in Massachusetts.....201
Wright, Walter E.—Food Economies at Burke Foundation..... 20
Writing With the Knee, Apparatus for—Blachly (Ab.).....226

X

X-Ray Film Holder, Dorr Dental..... 71

Y

Yachts, Conversion of Into Ambulance Boats—Eaton..... 81
Young, Charles H.—Hospital Service Flag (Corr.).....453

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

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THE HENRY W. PUTNAM MEMORIAL HOSPITAL, BENNINGTON, VT.

A Municipal Hospital Supported by the Income From Municipal Waterworks—Electricity Economically Used in Diet Kitchens

By HARRY LESLIE WALKER, Architect, and S. S. GOLDWATER, M. D., Consultant, New York

ON a beautiful knoll of 9 acres' extent just on the edge of the village of Bennington, Vermont, and with the Green Mountains as a background, is being built the Henry W. Putnam Memorial Hospital. Not far away rises the stone shaft marking the site of the Revolutionary battle of Bennington. Where the Vermont farmers drove the red-coats before them on that memorable day, it is hoped modern hospital methods will wage an equally successful fight against disease and suffering because of the generosity and forethought of one of the men of this community. Some years before his death Mr. Henry W. Putnam presented the village of Bennington with its water system, and in the deed of gift he provided that the net income from the water service should be used for but one purpose, the building and maintenance of a hospital to serve the people of Bennington and the surrounding country. Upon his father's death Mr. Henry W. Putnam, Jr., gave to the corporation formed to build and operate the hospital the funds for the construction of the building itself, so that none of the accumulated income from the water system would have to be used for that purpose, but all could be conserved for the maintenance of the institution.

The land surrounding the hospital has been carefully laid out with sites arranged and reserved for possible future buildings. The present building faces east, the long axis running north and south, and the sunshine reaches all of the rooms at some time during the day.

In the first story at each side of the main entrance vestibule are the superintendent's office and the business office, and at each end of the main corridor, which is of ample width, is an eight-bed ward, and beyond the wards the solariums. The solariums have tile floors and are surrounded with swinging sash and screens, and in warm, pleasant weather convalescent patients may be moved in rolling chairs to the surrounding lawn by way of gently inclined ramps that will be built extending from the solarium floors down to the grass. The nurses' station in each of the wards is enclosed in glass and provided with a small sink and electric plug. This glass enclosure permits an unobstructed view of the entire ward, and allows the windows to be opened for ventilation and the rooms to be cooled, particularly at night, without exposing the nurse on duty to an uncomfortable temperature.

At each end of the building, between the wards and the private and semi-private rooms, are the nurses' utility rooms, diet kitchens, toilet rooms, bath rooms, small linen closets and blanket warmers. The utility rooms will each be equipped with lavatory, laundry tray and sterilizing slop sink, as well as shelving and hanging racks. In the diet kitchens are a gas and electric stove, steam table, sink with drain boards, and refrigerator, as well as ample case room for dishes and supplies.

It is interesting to note that an arrangement has been perfected between the trustees of the hospital and the electric lighting company supplying current, for a special rate on a cooking circuit which has been installed, low enough so that electricity may be used for cooking and similar purposes in all of the diet kitchens. This circuit has also been carried to many other places throughout

Fig. 1. The Henry W. Putnam Memorial Hospital, Bennington, Vt

the building and is there available by means of base plugs. Gas has also been carried not only to the main kitchen and diet kitchens, but also to other rooms, where it will be available for heating purposes, sterilizing, and cooking.

In the angle formed by the junction of the rear wing and the main portion of the building is located the entrance for patients, and also for such supplies as would not go to the kitchen. Near this entrance is the doctors' examining room, provided with a toilet and necessary cases for supplies. Located in the center of the building and near both principal entrances is a large linen room for storage of the immediate surplus of linen, also the elevator, which is of the electric push-button type and amply large enough to accommodate a patient on a stretcher, with two attendants.

The patients' rooms in the first story, other than the two large wards, have been designed to take one, two or four beds, thus permitting a flexibility of accommodation according to the prices that people may desire to pay for service. Across the main corridor from the main entrance is the reception room for visitors. In the first story of the rear wing of the building is the main kitchen with a separate outside entrance hall in which is the large refrigerator, the staff dining room with serving pantry, the servants' dining room, two large storage pantries for kitchen supplies, and the rear stairs to the basement and to the servants' rooms above. In the main kitchen are gas ranges, large vegetable and dish sinks, and the necessary cases for dishes and supplies. This room has large windows on either side, thus insuring the best of cross-light and ventilation. The main stairways, which extend from the basement to the attic, are located at each end of the main wing of the building, and are designed with wide treads and low risers, so as to be especially easy of ascent.

In the second story of the main part of the building the

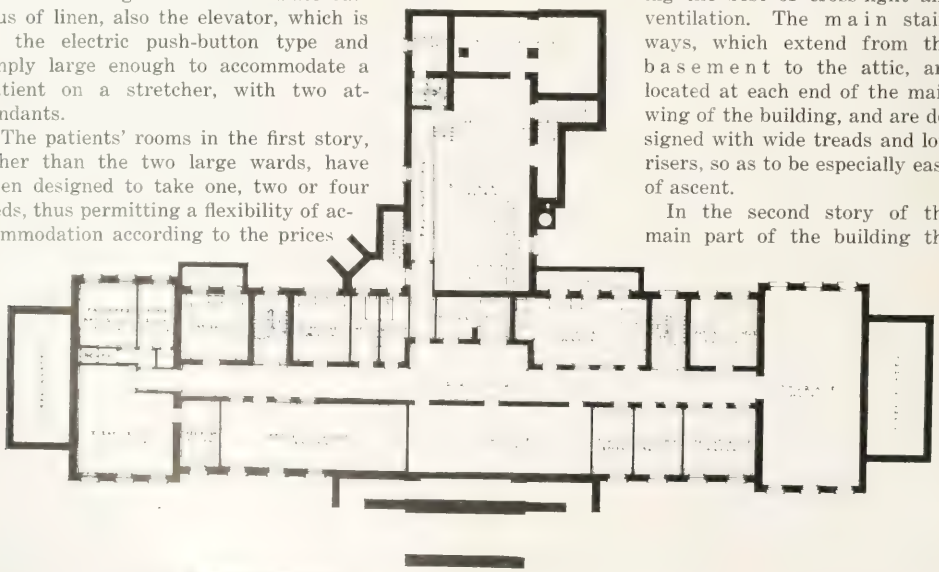


Fig. [illegible] Basement floor plan, The Henry W. Putnam Memorial Hospital, Bennington, Vt.

diet kitchens, utility rooms, general baths, and toilets are located over those in the first story, and the remainder of the space includes rooms for the matron and resident physician, and nine private rooms for patients, six of these rooms being arranged to connect with private bath rooms. At the present time a partition has been placed across the main corridor near the north end of the building, so that six of these rooms may be used for nurses. It is hoped that a separate building for a nurses' home will be erected in the near future, and when this is done, these rooms will be used for patients as originally planned.

The rear wing of the building in the second story is occupied by the operating suite, separated by a solid partition from the servants' quarters, which have a separate stairway from the first story. The operating suite consists of the operating room, the etherizing room, the sterilizing room, the surgeon's dressing room, and the nurses' dressing room. These rooms are fitted with the necessary plumbing fixtures, cases, lockers, etc., and there is a shower bath and toilet provided in the surgeon's dressing room. Especial study has been devoted to the lighting of the operating room, there being a large fixed studio window on the north side and two ordinary double-hung windows on the south side of the room. The electric lights have been placed at the four corners of a rectangle 5 feet by 7 feet in the center of the ceiling, thus avoiding shadows and the unpleasant heat from a large cluster of lights concentrated immediately over the operator.

The basement of the building is given up to rooms for the boilers fuel, and mechanical plant, the x-ray room with its accompanying dark room, a small lecture or assembly room, the lavatory, dispensary, laundry with soiled linen chute from the two floors above, patients' clothes room, carpenter shop, morgue, general men's and women's toilets, quarters for the engineer and his helper, and large unused and well-lighted spaces which may in the future be planned in detail for the growing needs of the institution.

The present capacity of the hospital will be 30 beds, the north end of the second story being used for the nurses' rooms; after the separate building has been erected for the nurses the capacity will be 35 beds. The building is planned and constructed so that a second story may be added over the present wards, making a possible future capacity of 51 beds. If at some future time even this number is found to be insufficient, the wards may

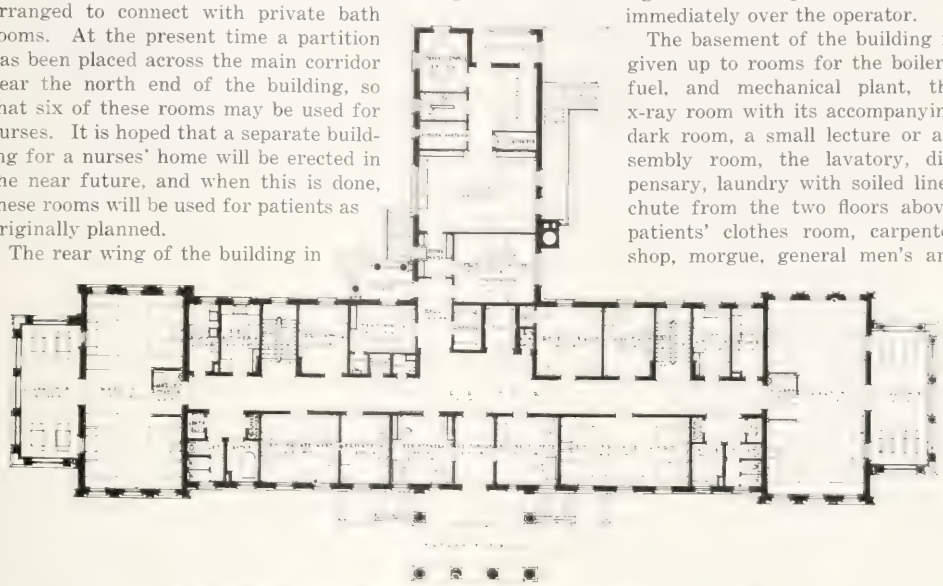


Fig. 3. First floor plan, The Henry W. Putnam Memorial Hospital, Bennington, Vt.

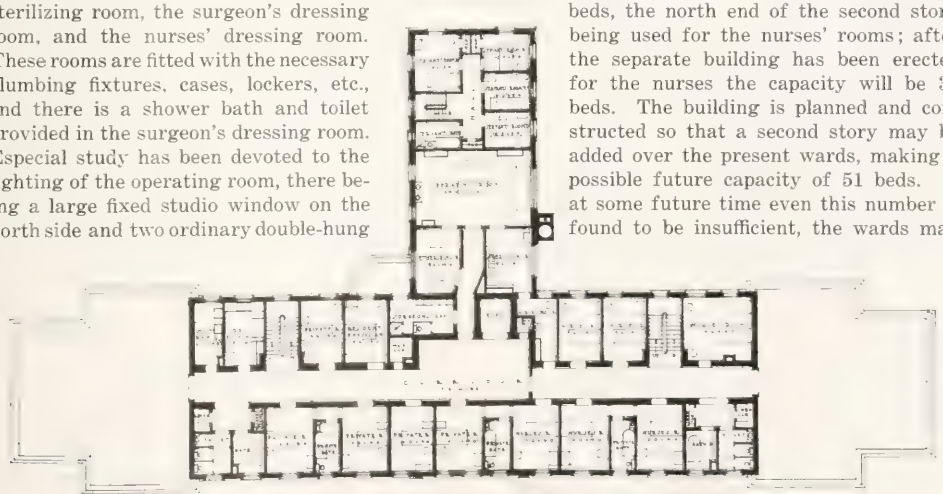


Fig. 4. Second floor plan, The Henry W. Putnam Memorial Hospital, Bennington, Vt.

be extended to the west, four beds being added in each of the four wards, thus making a total of 67 beds, which is probably more than the community will need for many years to come.

The exterior of the building has been designed in a simple modified colonial style; a brownish red rough-face brick, with white marble and white wood trimmings, and a green slate roof have been used. The general construction of the building is fireproof in every respect, the floors being of reinforced concrete, the exterior walls of hard-burned hollow terra cotta blocks veneered with face brick, and the partitions of gypsum blocks. All of the baths, toilet rooms, utility rooms, diet kitchens, and rooms of the operating suite have high white tile wainscoting, and the floors throughout the entire building are of composition. The doors are all flush panel doors, the cases specially designed with round corners, and all plaster and tile corners are rounded throughout the building. The building will be heated by low-pressure steam, a vacuum system being used. High-pressure steam will be supplied in all diet kitchens, utility rooms, and in the operating suite, for cooking and sterilizing purposes. The total cost of the building, including the architect's fees, is approximately $100,000, which is about 35 cents a cubic foot.

THE INSTITUTIONAL CARE OF THE AGED*

General Neglect of the Subject—Scientific and Practical Aspects—Importance of Utilizing the Economic Possibilities of the Aged in Institutions

By I. L. NASCHER, M. D., New York, Editor of the Departments of Geriatrics, "Interstate Medical Journal" and "Medical Review of Reviews;" Chief of Clinic, Department of Internal Medicine, Mount Sinai Hospital Dispensary, New York

THERE is probably no class of dependents whose welfare has been more completely neglected, who have received less scientific study and care, than the aged. The child dependent has the world for its guardian; the aged dependent is disowned by his own. There are scores of works dealing with the child in the home and in institutions; until recently there was not a single work considering the institutional care of the aged, not a journal of any kind sufficiently interested in the welfare of the aged to devote special space to this subject.

So completely has the welfare of the aged as a scientific study been ignored that today there is not a home for the aged, so far as I know, in which the vital problem of the proper feeding of the aged is understood or even considered. As a rule their dietaries are arranged either haphazard on the guiding principle to get the most food for the least cost, or else the dietaries are based upon the dietaries of institutions of a different character. Yet it has been found that the aged require only about half of the amount of food, calculated in calories or food energy, that young, active individuals require and the proportions of the three classes of food are different. The aged require less than half of the protein class, the tissue-forming food such as meat, cheese, and white of egg. They require about half the amount of carbohydrates or energy-producing food. The principal foods of this class are the starchy foods and sugar. Of fat, the heat-producing food, they require almost as much as in earlier life. When the teeth fall out, food which must be masticated must either be omitted or else so prepared that it can be swallowed and digested without difficulty. The principal article of food that must be masticated is meat; almost all other foods can be crushed between the gums or between the tongue and hard palate, or can be brought into a semiliquid form. If meat is given at all after the teeth fall out it must be thoroughly boiled and chopped fine. There are physiological reasons why food should be in a liquid or mushy state when swallowed and why vegetables that contain a large amount of cellulose or woody fiber should be used. The principal foods of this character are beets, carrots, onions, turnips, cabbage, the greens, like spinach, lettuce, kale sprouts, etc.

Tea constipates and is therefore objectionable, as most aged persons suffer from constipation. Milk, the most healthful of all foods, contains a comparatively large amount of lime. In the young, lime is required for bone growth, but in old age the body retains the lime that is taken in excess of the body requirements, and it deposits the lime in the joints, making them stiff and hard, in the arteries producing arteriosclerosis, and in other situations causing other disease conditions. Milk can be used in small quantities, but as a beverage buttermilk is better. The only material difference between milk and buttermilk is in the fat content, milk containing 4.5 percent fat, while buttermilk contains only 0.5 percent; but buttermilk contains less lime. If time permitted we could in this way take up one food after another and show how we can apply scientific feeding to the aged, especially in institutions, and how the

*Read at the National Conference of Charities and Corrections, Pittsburgh, June 7, 1917.

present haphazard mode of feeding is wrong, injurious, and wasteful.

Let us consider for a moment what the problems are that we have to deal with in the institutional care of the aged. They are, from the sentimental standpoint, to make the inmates happy; from the broad, humanitarian standpoint, to keep them healthy and prolong their lives; from the practical, economic standpoint, to lessen the burden that they impose upon the community, by utilizing their economic possibilities and diminishing the cost of their maintenance. These problems are interrelated, and each must be considered in its relation to the others. Yet we find institutions in which only the economic side is considered without regard for the health and happiness of the inmates—where the measures taken to secure the happiness of the inmates are detrimental to health and the question of cost is disregarded.

The most important of the problems, and the one which has received the least consideration, is the utilization of the economic possibilities of the aged in institutions. While this is primarily an economc problem, it affects vitally the health and happiness of the inmates. In the New York City Farms Colony, which is a branch of the New York City Homes for the Aged and Infirm, there are about a thousand inmates, male and female. Every one of these inmates except those in the infirmary is employed at some useful occupation. The cobblers are in the shoeshop mending shoes and the tailors are in the tailorshop repairing clothing; the printers work in the printing office and the painters do the painting about the institution. Those having no trades work on the farm or in shops where skilled labor is not required, and those least capable do light work, such as setting the table and removing the dishes, or are employed as doorkeepers, gatekeepers, messengers, etc. They are urged, but not compelled, to work, and so thoroughly systematized is the work that almost all the labor about the institution, including the erection of buildings, is done by inmates. The practical results are: (1) the cost of maintenance is extremely low; (2) the inmates being employed, their minds are occupied with their work and not on regretful retrospection or gloomy forebodings; they are happy, since they feel that they are contributing toward their support and are not useless paupers; (3) being employed, they do not suffer from certain ailments that are due to inactivity and mental depression. We see in this institution how the three problems, the sentimental, the humanitarian, and the economic, are interrelated, and the solution of the one solves the other two.

Not far from the City Farms Colony is another home for the aged, one of the richest and most beautifully equipped institutions of the kind in the country. The inmates, most of whom are accustomed to hotel life, have there all the comforts of a good family hotel, midst ideal country surroundings. The organization maintaining this institution has abundant funds and there is no need to practice strict economy; indeed, each inmate receives a couple of dollars a month for incidental expenses. Kind friends throughout the country do what they can to make the inmates, or guests as they are called, happy and contented. Yet these old people, who have made thousands, perhaps millions, of others happy, are not happy themselves. They are grateful for the freedom from worry and care, and for a short time after their admission they are happy in their new surroundings. After a while the novelty wears off, the inactivity and sameness become monotonous. They have nothing to do but think and wait, as one inmate said; wait for the time when the good Lord would take them.

I have heard similar expressions in other institutions. An inmate of a public almshouse, looking wistfully across the river where he could see men working and children playing, said, "Give me something to do, to keep my mind off myself and death." A relative who had been in a private home for the aged had the same complaint. "I do nothing all day but sit and think, think of my wasted past and of the dismal future. If I had something to do to keep my mind occupied, I would be satisfied."

Give them something to do to keep their minds occupied. In institutions where economy must be practiced and expenses must be kept down, give them work which they can do and which is now being done by paid employees. Or give them productive work which can be disposed of for the benefit of the institution. In large institutions where there are many inmates representing many vocations, the work can be so systematized that all may be usefully employed and each one contribute some service which will lessen the expenses of the institution. It may be necessary to urge some to work, but most of the inmates will work willingly, if only to show that they are still able to earn something, that they still possess self-respect and they do not want to be looked upon as worthless paupers.

Systematic employment can be introduced in all classes of institutions for the aged, the nature of the work depending upon the character of the institution and the inmates, their mental and physical ability, and the facilities possessed by the institution for giving suitable employment to the inmates. In public institutions where economy

must be practiced, the primary object should be to stop leaks in the expense account by replacing paid employees. In other institutions inmates can either help in or about the institution or be engaged upon the manufacture of articles requiring little physical strength, and which can be disposed of for the benefit of the institution or themselves. Even in the richly endowed homes work can be provided which will be interesting and profitable. The ultimate benefit will be better health and greater happiness of the inmates beside a lessening of the burden of their support.

An important factor in utilizing the working capacity of the inmates of institutions is the improvement of the vision through proper glasses. A very large proportion of aged persons need glasses, yet I have been told by inmates of homes that though they had defective vision their eyes were never examined, they had no glasses, and consequently they had not been able to read a book in years. This could easily be remedied at but little expense.

The keynote of the treatment of aged persons is mental stimulation, to overcome the mental depression natural to the aged, especially those who are dependent upon others for their support. This mental stimulation may be brought about through recreation or amusements, or through arousing an interest in the affairs of the day, or in agreeable work, or in a hobby, or in self or another, or in the institution itself. I saw this well exemplified in a home for aged pensioners near Vienna which I visited a few years ago. The inmates were proud of their institution, and my guide took pains to show me how they helped each other to keep their dormitories, dining rooms and other rooms, halls, and walks clean and neat. They were proud of the appearance of the shops and of the skill of the inmates who worked there. The men took pride in their appearance, and before going out they washed themselves and brushed their clothes, hats, and shoes. They had a band and an orchestra composed of inmates who gave occasional performances and always had appreciative audiences. Provision was made for their recreation; there was a well-stocked library, and a canteen was established for them on the grounds. The canteen was maintained from the proceeds of knick-knacks made by the inmates, of concerts by the band, contributions from visitors and a slight profit on the sale of things supplied by the canteen, all of which went into a common fund. Similar provision for the recreation of inmates could be made in all homes for the aged at but little cost.

Nothing will stimulate pride in appearance and an interest in life as much as association with the opposite sex, and this applies to both sexes. There have been cases of improprieties in institutions where the sexes were not segregated, but these are so rare that this cause for segregation may be disregarded when we consider the benefits to be derived from the association of the sexes. It is a cruel hardship to separate old couples, especially when they are housed in the same building. I know a couple in an almshouse who had no opportunity to speak to each other for a year after they entered the institution, and they could see each other only from a distance at church services. The superintendent was persuaded to waive the rules and permit these old people to meet occasionally. The aged should, however, be segregated from the able-bodied lazy individuals; also from cripples and especially from the insane. There are many factors connected with the housing and the construction of the buildings that influence the health, happiness and comfort of the inmates. There is no uniformity in the housing of the aged, even in the same class of institutions. In public institutions there are usually large dormitories; some have separate rooms holding from four to six, some have dormitories for men and small rooms for women. In some there are large dormitories, but married couples occupy cottages, each couple having one large room. This is not the most economical, but it is the most satisfactory and humane method of keeping old couples together. Private institutions generally have rooms holding from one to six beds, but some have large dormitories. Where there are many inmates the cottage system requires much more ground, the initial cost is greater, the cost of maintenance is more, and the administration is more difficult than where all the inmates are housed in one or two buildings. It is, however, the ideal method of housing couples who can find in their own room a semblance of home, and for small institutions which are not bound down by rigid economy and can afford to give each inmate a separate room.

Custom, convenience, and civic pride favor the erection of large homes in the heart of the city, where they can be shown as monuments of the city's generosity. Such a situation disregards the fundamental problems in the institutional care of the aged; their health, their happiness and the cost of their maintenance. I regret that the time at my disposal does not permit me to discuss this factor in the welfare of the aged at length. I have found many faults in the construction of the buildings for housing the aged. Architects and builders do not take into consideration the many ailments of the aged, and this oversight is responsible for much distress among the inmates. Aged persons generally suffer from shortness of breath and many have heart disease. If there is no ele-

vator in the building, dining rooms, dormitories, sleeping rooms, and toilets should be so placed that these sufferers will not be obliged to climb two or three flights of stairs to reach their beds or the toilet. Owing to the frequency of bowel, kidney, and bladder diseases among the aged and the urgency of the use of the toilet in such cases there should be toilets on each floor. Insufficient and badly placed toilets form one of the most glaring faults in many institutions.

Another fault in many institutions is poor washing facilities, especially baths. Aged persons generally dread the tub bath, owing to the difficulty in getting in and out of the tub. Stout, weak old women often find it impossible to get out of the tub without assistance. Shower baths, spray baths or specially constructed tubs will obviate this difficulty.

Every institution, however small, should have an infirmary ward and a separate room to which dying patients can be removed. There is nothing more depressing or harrowing to a sick old person than to witness the death struggle of a neighbor.

In winter, beds should be warmed before inmates retire. If there are any who suffer from bronchitis they will begin to cough as soon as they enter a cold bed, and they may keep the whole dormitory awake for hours. Many persons cannot sleep in a cold bed until the heat from their body has warmed the bed sufficiently to make it comfortable. As there is much less radiation of heat from the body of an old person than there is from the body of a young, active person, it takes much longer to warm the bed. Owing to poor circulation old people generally have cold feet and many cannot sleep until their feet are warmed. In one institution the inmates receive woolen bed socks on retiring. In another institution where many of the inmates complained of cold feet, cold beds, and insomnia, the superintendent at my suggestion brought a number of empty mineral water jugs from the cellar. These were filled with hot water and each inmate upon retiring placed a jug in his bed, and when he got into bed he pushed the jug down to the foot of the bed and thus kept his feet warm.

It is not possible within the time limit to take up the many factors that contribute to the health and happiness of inmates of institutions, but I will mention a few things that impressed me in my visits to homes for the aged. In one where the inmates were paired so that each one had a companion, the companion of one had paralysis and the other gradually acquired through unconscious mimicry the dragging step of the paralytic. It was necessary to employ harsh measures before he was cured of the habit. I have seen tremors and a lisp acquired in the same way. Many old persons have bromidrosis or bad-smelling perspiration. Where many such sufferers congregate they give off a very offensive odor, but persons who are constantly around them become accustomed to the odor and disregard it. To visitors it may be so repulsive that they cannot be near the sufferers, and they lose interest and sympathy for them. Many of the minor ailments of the aged are neglected because they are supposed to be due to old age, and nothing can be done for old age. This is as much the fault of physicians who do not understand senile ailments as of those who have charge of the aged. This, however, is a matter for the medical profession to take up, but there is little likelihood that the medical profession will take up seriously the conservation of the aged unless there is a public demand for it. And before the general public will make such a demand it will be necessary to rouse the public conscience to the realization of its neglect of the aged.

I have only skimmed over my subject, omitting many important features, laying stress only upon the one feature, the utilization of the economic possibilities of the aged in institutions. I hope that I have been able to show that the institutional care of the aged deserves thorough investigation, so that we may be able to correlate and solve the various problems that I have pointed out. There are features in many institutions that can be applied generally to advantage, but at the present time there is no uniformity, no standard, no guide to point out what is best and why. There is no doubt in my mind that a thorough investigation will result in revolutionizing our present methods of caring for the aged. Instead of forcing them into the humiliating, degrading position of being paupers of the almshouse, we will look upon them as we look upon the child in the asylum or the patient in the hospital, as inmates of homes for the aged; we will look upon them with pity instead of scorn, with sympathy instead of indifference. We will learn how to conserve their usefulness so that they will not be so heavy a burden upon the community, and may even become an asset instead of the positive liability that they are at present. In public institutions we will learn how to conserve their happiness by making the institution a home and not a prison. In public and private institutions we will learn how to instill self-respect, arouse hope and stimulate ambition, instead of killing every spark of self-respect, hope, and ambition that the aged dependent may have when he enters his final refuge. In all we will learn how to increase the happiness, promote the health and prolong the lives of those to whom we owe, in gratitude, our best endeavors.

ECONOMY IN THE CUTTING OF SURGICAL DRESSINGS

Importance of Eliminating All Waste by Standardizing Preparation of Dressings—Need for Practical Training of Pupil Nurses and Red Cross Aids—Diagrams Used in Cutting Gauze

By CATHERINE C. McGRATH, R. N., Chief Surgical Supervisor, Grace Hospital, Detroit

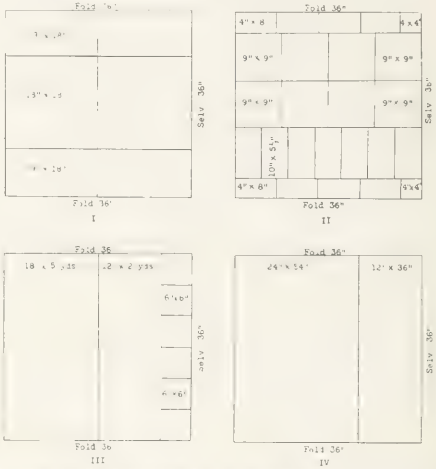
WAR conditions at the present time lend special interest to the subject of rapid and economical preparation of surgical dressings. It is well known that thousands of women volunteers are making up surgical supplies and dressings under the auspices of the American Red Cross and other organizations, all ultimately destined for use in the Army, Navy or Marine Hospital service.

Training in the preparation of cotton surgical supplies and dressings should begin with the pupil nurse, who at the start has little idea of the cost of supplies or the economies of their preparation. It is, therefore, necessary first to present to the pupil nurse a frank statement as to the cost of gauze, cotton and other accessories that enter into common surgical dressings. The pupil should learn that all waste ends and cuttings in the manufacture of dressings have a value, even though that value be represented by clean white rags, which are a marketable commodity.

The next general principle to be taught is to the effect that the cutting of gauze for dressings, compresses, sponges, etc., should be arranged on definite geometrical lines so as to fully avoid waste. The pupil should learn that fanciful dressings and surgeons' hobbies in supplies should be discouraged and that compresses, sponges, bandages and all dressing units should be fully standardized and approved by the entire surgical staff.

A study of the diagrams presented herewith will show that surgical dressings can be prepared from standard bolts of absorbent gauze without the waste of even a fraction of an inch. In a large surgical clinic, the deviation of an inch from the standard would result in the waste of hundreds of thousands of yards of gauze in the course of time. The training of pupil nurses in the preparation of surgical dressings should be wholly practical. Didactic or theoretical teaching has no place in this work.

A special table with a smooth, clean, flat top, slotted for the large gauze knife, is a necessity where surgical supplies are prepared in quantity. The gauze should be purchased in uniform folds from 18 to 36 inches in width and all ravelings removed preparatory to cutting. A standard bolt of absorbent gauze is usually 100 yards in length and folded in 36-inch widths with the selvedge on both sides. The handling of the bolt often causes edges to overlap, and to remedy this the gauze should be grasped firmly on both sides and shaken down, thus bringing the edges together. The tools necessary for cutting the gauze are a long-bladed gauze knife, such as tailors use, a tape measure, and a large sharp pair of scissors.



Diagrams for the economical cutting of gauze. I., surgical sponges; II, special sponges (mastoid, tonsil, and vaginal sponges, and wicking); III, hernia bandages and filling for cigarette drains; IV, laparotomy towels and abdominal and eye pads.

SURGICAL SPONGES (DIAGRAM I)

The gauze is measured down on the selvedge side 9 inches top and bottom, thus making when unfolded an 18-inch length; the intervening space is also 18 inches. A 36-inch width of the gauze is then cut in the center, and the resultant squares, when properly folded, are termed "surgical sponges." These are made by turning each corner to the center of the square twice and then folding over one-half in each direction, bringing all raw edges on the inside of the square and placing the greater bulk of the gauze at the central point, where it is most needed.

SPECIAL SPONGES (DIAGRAM II)

This is a complex diagram, arranged for the production of special sponges, the top and bottom rows showing squares for "tonsil sponges." The square, 4 by 4 inches, produced at each end of the line provides for the "mastoid sponge." The "tonsil sponge" is made by folding the square of gauze diagonally. Place the first two fingers on

gauze at center, fold left side over fingers toward the right; fold points back over fingers toward the left and then turn the gauze at base so that all points of gauze point toward the top. The points can then be rolled down half way and the gauze turned over at base, forming a cap. The 9- by 9-inch squares in this diagram produce what are known as the "V" sponges or No. 10 sponges used principally on forceps for vaginal work, and put up ten in a package. These are made by folding down one inch at the top, then fold left side over one-third and fold the right side over so that the raw edge comes inside the limits of the folded left side. Fold lower edge into the folded opening at the top. The remaining 10- by 5½-inch segments are used for wicking, for packing or drainage in the usual manner by turning in at the top and bottom so as to eliminate raveled edges, each side being folded in and the folded strip then twisted.

HERNIA BANDAGES (DIAGRAM III)

The segment measuring 18 inches by 5 yards produces what is known as a "hernia bandage." The gauze for the so-called "hernia" bandage is turned in at the top and bottom about half an inch and then folded over one-third from each side and rolled in same manner as a roller bandage. They can be applied the same as a "pelvic spica." The other large segment is 12 inches by 2 yards, and is known as packing rolls after being folded into the requisite widths, which will vary according to the use intended. The 6-inch squares on the margin of this diagram will produce filling for gutta percha cigarette drains, to be used either with or without iodoform emulsion.

LAPAROTOMY TOWELS (DIAGRAM IV)

This shows first the laparotomy towel made by a fold 24 by 54 inches. The width is folded over one-third, having selvedge on top, which edge is also folded in one-half inch. The segment is then sewed around the edges and once through the center and an 8-inch tape securely fastened to one corner. The remaining segment, 12 by 36 inches, can be used as several of the segments illustrated in the previous diagram. This size is suitable for covering of ether masks and can be rewashed and used several times after sterilization. The 36-inch fold of absorbent gauze can be readily used to produce the so-called "abdominal pad" and "eye pads," these pads being filled with absorbent cotton waste to the proper thickness. The "abdominal" pad is usually made 9 inches square. The "eye" pad is made of half thickness of absorbent cotton covered with two layers of gauze on each side and the edges sewed. They can be made to fit the eye.

The use of the above-described diagrams in a large surgical clinic or an open surgical service provides standardized surgical units that will be found acceptable to practically all surgeons. An extended experience with several methods of cutting and preparing surgical dressings warrants the statement that we have found the preparation of units according to these diagrams economical and free from waste.

In conclusion it should be stated that the majority of these surgical units can be systematically washed and used again. It is the practice of this hospital to wash all gauze dressings and bandages and utilize the washed gauze after proper sterilization and culture, for secondary dressings in the surgical department. This has been carried out here for ten years and in many other large hospitals for a like period. It has been demonstrated that washed dressings are softer in texture and more desirable for redressing wounds than unwashed mill gauze.

THE INSTITUTIONAL LIFE OF THE MORON

Industrial Training the Chief Factor in Happiness and Usefulness for This Class—Border-Line Cases Never Become Self-Directing Members of Society

BY R. P. C. WILSON, M. D., Superintendent of the Missouri Colony for Feeble-Minded and Epileptics, Marshall, Mo.

In my experience, industrial training offers a short cut to reclaiming the best attributes of the pupil. It acts as a stimulant to the sluggish mind and is the dominant factor in making the life of the moron happy, contented, and useful in an institutional way. We find that object teaching offers the best results.

Colony Farm Plan.—It may be said that the benefits derived from industrial training apply, in like measure, to those employed upon the farm. This form of employment contributes materially to the health of the patient and promotes his welfare in every respect. We find, also, that the average afflicted boy displays more adeptness for farm work. Each child is proud to know that he materially assists in his own support. Constant supervision is, of course, necessary.

Border-Line Cases.—From our experience, it would not be safe to say that patients of this type may be brought to the standard of normal or made self-sustaining members of society. Certain talents may be developed by special training, to a degree not possible through ordinary methods of instruction in the environment usually surrounding such cases, but, in my opinion, the patient can never be made wholly capable of competing, on equal terms, with his normal fellows, nor should one of this type be expected to contribute to the best interests of society through perpetuation of his or her kind. In many cases the mental age of the epileptic is advanced several years by a reduction of seizures accomplished by treatment not possible in private medical practice, but as this malady is not known to be curable and is considered hereditary, we do not consider it safe to recognize the improved border-line epileptic, regardless of the extent to which his mentality has been advanced, as normal.

The sunrise never failed us yet.—Thaxter.

THE INSTITUTIONAL CARE OF EPILEPTICS

Colony Method of Care Inaugurated at Bielefeld—Hereditary Basis for the Condition—Institutional Care Necessary in Majority of Cases—Few States Provide

By WILLIAM T. SHANAHAN, Medical Superintendent, Craig Colony for Epileptics, Sonyea, N. Y.

WHILE epilepsy, as such, has been recognized since a remote period in the history of the world, it was not until comparatively recently, so far as authentic records go, that any special effort was made to provide proper care for this afflicted class. In the late sixties the colonization of epileptics was inaugurated at Bielefeld in western Germany. Some years later this principle was carried out in England, and subsequently in the

Fig. 1. Executive building, Craig Colony for Epileptics, Sonyea, N. Y., in the foreground; in the background, the hospital and laboratory.

United States. At the present time but comparatively few states have made special separate provision for caring for this class of defectives. It is conservatively estimated that in the United States there must be over two hundred thousand epileptics, of whom but a very small fraction are in institutions. In this connection it should be stated that the National Association for the Study of Epilepsy has done much in spreading broadcast information pertaining to epileptics and their need for care and treatment, especially in colonies.

While the exact etiology of the condition is not so well established in some respects as some other disorders known to medicine, there seems no question but that there is a hereditary basis for the condition in the majority of cases, the direct ancestry being tainted with some abnormality of the central nervous system, as the result of which the potential epileptic is born, his symptoms to make their appearance on the addition of some exciting factor, which in itself could not bring forth the epilepsy, unless the epileptic constitution, so-called, was present. The active part played in producing epilepsy by alcohol, syphilis, birth injuries, infectious diseases in infancy and childhood, traumatism to the head at any period in life, etc., is well known. In any individual epileptic, however, a careful study of the history of the patient should be made in order to exclude coincidental incidents which have been assigned causative relationship to the epilepsy. The continued development of the activities of properly trained field investigators will make available in public institutions a broader information of the ancestral and early personal history of patients.

At the present day it is considered that, independent of or associated with gross lesions of the brain, psychogenic, chemotoxic, and endocrinopathic factors are separately or conjointly responsible for the appearance of epilepsy. The disturbance of the functions of the entire gastrointestinal tract, with its consequent probable upset of normal metabolism, is, as a matter of common knowledge, present in the majority of epileptics. But to say that this disturbance alone is the cause of epilepsy and that its removal by surgical interference or otherwise will cure all epileptics is contrary to fact. The influence of the menstrual period or pregnancy in the female epileptic has, in our experience at Craig Colony, been exaggerated. In the average female epileptic there is no material connection between the frequency of seizures and the menstrual period. Some substance, at present unknown, no doubt makes the cerebral

Fig. 2. Part of the group of cottages for female patients, Craig Colony.

cortex oversensitive, perhaps causes or is the result of the upset of the biochemical processes in the essential nerve cells, in consequence of which reactions present as various types of epileptic seizures. To sum up the etiology of epilepsy, it can be said to be very complex, the relationship to other defective states being often very close, and the alleged exciting causes often but coincidental.

Prophylaxis is of great value in preventing the potential epileptic from developing active marked symptoms of the disorder. Not every individual who suffers from a spasmophilia or some other condition producing convulsions during infancy or early childhood will become epileptic. Many

individuals, however, who during early life have convulsions, do because of lack of attention to common-sense rules of living, subsequently develop chronic epilepsy. It should be borne in mind that the central nervous system may be permanently damaged at the time of any convulsion, or the cause of the first convulsion may have permanently damaged the central nervous system previous to the appearance of this initial convulsion.

Regarding the symptoms of epilepsy, the major convulsive seizures commonly termed grand mal are ordinarily readily recognized even by laymen,

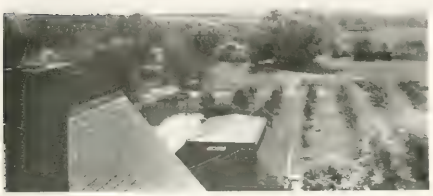


Fig. 3. Bird's-eye [illegible] cottages for male patients, Craig [illegible]

but the petit mal seizures, the automatic periods, the brief psychic upsets and similar phenomena of epilepsy are too often overlooked for long periods of time so that progressive development of epilepsy is not perceived at a time when the proper relief might be afforded. Interference with consciousness, either partial or complete, is the essential characteristic of epileptic seizures. Because of their disorder, the great majority of epileptics, their mental condition being not too much below normal, are sooner or later barred from remunerative employment. In the home many epileptics are a constant source of anxiety and furthermore to be properly cared for necessitates perhaps a possible wage-earner of the family remaining from service elsewhere to look after this defective member.

While medication directed toward the restoration, so far as possible, to a normal physical condition is plainly indicated, the indiscriminate use of various sedatives, especially bromids, is to be avoided. The free administration of alleged "cures" consisting principally of bromids, has done untold harm to great numbers of epileptics.

The epileptic to be benefited must follow up a reasonably strict way of living, the acquisition of habits of personal discipline and self-control being essential. While some epileptics may, in the outside world, be able to accomplish such a way of living, the majority, in order to secure such a routine of life, must be placed in institutions. No epileptic should ever use alcohol, as it is a direct excitant of epilepsy.

Excluding those epileptic children who are markedly impaired mentally, it is possible to educate the epileptic child to quite a satisfactory degree, not only in the lower scholastic branches, but especially in manual work. Patience, tact and the ability to recognize psychic conditions in epileptics are of fundamental importance before teachers can obtain desired results.

The prognosis, so far as permanent cure in the epileptic is concerned, cannot be made with the positive assertion possible in many other disorders. The epileptic constitution or predisposition still remains, although the actual symptoms may disappear. Therefore it is possible, if the method of life outlined is not consistently followed, to have a recurrence of symptoms. Many of the patients admitted to the institutions for the care of epileptics have not had properly placed before them, previous to admission, their real condition, and in consequence fail to cooperate in their treatment. Those epileptics of higher mentality in whom it is possible to develop an insight into their condition offer a most satisfactory class in whom to obtain beneficial results. Hygiene, including a reasonable regulation of diet, bathing, recreation, etc., satisfactory occupation to insure healthy fatigue and the proper functioning of the body as a whole, keeping alive interests to hold in abeyance or prevent mental deterioration, the allowing of such liberties as are consistent with the disorder, a minimum of medication, surgical intervention when such can be definitely proved as necessary, continued effort to prevent psychic upsets because of environmental stress—each and all of these are to be utilized in carrying out the successful treatment of epilepsy. Individual treatment, long continued, is demanded in epilepsy if even partial success in treatment is to be attained.

Fig. 4. General Assembly on Annual Field Day, Craig [illegible]

STATE CARE FOR THE FEEBLE-MINDED

Segregation the All-Important Preventive Measure—A State, Not a Local Problem—Colony Care for All Classes of Feeble-Minded and Epileptic a Real Economy—Requirements as to Location for a Colony

By J. M. MURDOCH, M. D., Superintendent of the State Institution for Feeble-Minded of Western Pennsylvania, Polk, Pa.

IN the study and care of the feeble-minded we have entered upon a new era. We talk less of pathology and therapeutics and physiological training and industrial occupations for the feeble-minded, and more of eugenics, heredity, segregation, and sterilization; not so much of the individual, but more of the larger problem, the group; of prevention—and, in our zeal to push forward to the goal, sometimes of extinction. How convincingly the advocates of certain schemes prophesy as to the wonderful results to be accomplished by their plan is evidenced by the remark made to me a few days ago by a well-educated man who asked to what use we will put institutions for the feeble-minded when restricted marriage laws and laws for the sterilization of the unfit are generally adopted.

I would advise those who have the practical care of the feeble-minded in hand to stick closely to the bedrock of facts we know, and insist upon segregation as the one and all-important method of dealing with the feeble-minded. We know there are more feeble-minded than can be cared for in our institutions. We know that feeble-mindedness is an hereditary defect, and we know that the segregation of the feeble-minded in appropriate institutions or colonies prevents the propagation of feeble-minded children, at least by those who are segregated. We believe that feeble-mindedness is the basic social problem, responsible to a large degree for poverty, alcoholism, prostitution, and all sorts of crime. We know that the cost of caring for the feeble-minded in hospitals and asylums, in jails and prisons and county homes, is greater than would be the cost of their care in appropriate institutions. We know that the value of property destroyed by the crimes they commit would go a long way toward the construction of appropriate institutions. We must get away from the idea, and get the public away from the idea, that our institutions for the feeble-minded are institutions simply for the training of feeble-minded children. The care of the feeble-minded, as in the case of the insane, is a problem for the state, not the city or county. The good to be accomplished by the segregation of an able-bodied feeble-minded woman is too remote to appeal to the short-sighted local guardian of the poor, who is too interested in keeping down the tax rate in his district during his term of office and too accessible to the family and friends of the one who should be segregated.

The problem of caring for the feeble-minded today is in somewhat the same position as was the problem of caring for the insane half a century ago. The number of feeble-minded is about the same as that of the insane, and, though their segregation is possibly less imperative, it is in the light of eugenics as important, and the cost of provision for their care and for their maintenance is very much less.

Rather than have separate institutions for children and adults, or for men or women or boys or girls, I am of the opinion that large colonies to provide for all classes should be established by the state. There are many advantages in having an institution or colony in which all classes of the feeble-minded are cared for. A large proportion of the feeble-minded children under 16 years of age are extremely helpless. The adult feeble-minded women, as a rule, under direction, make the best possible nurses for these helpless little ones, whom they tenderly mother and watch over with a love and devotion greater than it is possible to obtain from paid employees. The adult feeble-minded woman can be utilized to advantage in the laundry, sewing room, and in the domestic duties throughout the colony. The presence of children relieves the institution of monotony, which makes the institution more homelike and brings about contentment. The adult feeble-minded men are usefully employed on the farm, in the garden, shops and occupations incidental to colony life. The school with its music and entertainments is the center of institution activity. In an institution where all classes of the feeble-minded are cared for, it is frequently found advisable to transfer patients from one department to another on account of improvement or deterioration, mental or physical. Such transfer can be easily made without formality or expense when the different departments are under a single management. Furthermore, I see no objection to caring for the feeble-minded and epileptic in the same institution. The needs of the epileptic and feeble-minded are similar, and all epileptics who will be cared for in a colony are more or less mentally deficient.

The advantage of the colony over separate in-

stitutions for various classes is summed up in the report of a committee of the Thirty-fourth National Conference of Charities and Correction as follows:

"The distinction of classes is imperative. The requirements, however, are best met under the same local management by suitable separation in space, variety of buildings and equipment, and judicious grouping. Under the same management, however, the classification may be complete. The continuity of their treatment and records is preserved. The hopeful and progressive spirit of the school counteracts the tendency to condone the lowering of standards in the custodial departments."

That splendid institution Letchworth Village, in the state of New York, may well be taken as an example of the most modern type of institution for the care of the feeble-minded, and I would call your attention to the admirable reports of its superintendent, Dr. Little, the trustees, and the committee under whose direction this noteworthy institution was established. New York, after its experience with separate institutions for special classes, in this, its newest institution, is providing one in which all classes of the feeble-minded and epileptic, with the possible exception of the moral imbecile or defective delinquent, will be admitted and classified within the institution.

A state colony for the feeble-minded should be planned to provide for between two and three thousand. The location should be far from any large city, and rather isolated. It is not necessary to locate an institution where farm land commands a high price. A large tract of from three to four thousand acres, a part of which is woodland, should be provided. Railroad communication for passengers and freight with advantages for side track to the institution grounds is imperative. It must be borne in mind that, to admit of the proper classification, such a colony will need more land than would an institution which provides for only one class of defectives.

There is a comparatively small group of the feeble-minded who have been designated by Dr. Fernald as "defective delinquents," for whom possibly a separate institution should be provided, at least in our large states. This institution should bear the same relationship to the colony for the feeble-minded that the hospital for criminal insane bears to other hospitals for the insane. Defective delinquents, as a rule, do not come under observation until habituated to vicious practices, and require a closer supervision and more rigorous discipline than can well be carried out in the colony for the feeble-minded.

In our effort to relieve the state of its terrible burden of feeble-mindedness, let us not become faint-hearted by a contemplation of the large expenditure necessary to put in effect the only means which offers a practical solution of the question, that is, the establishment by the state of institutions or colonies for the care of all the feeble-minded who cannot be properly cared for and safeguarded in their homes. Most of the states are now doing this for their insane, and, if the public, and particularly those who control the fiscal policy of the state, understood the importance of segregation of the feeble-minded, there would be no question about raising the money. Think of the money the state spends for other less urgent projects! One state, for example, spends upward of one hundred million dollars for canals; my own state contemplates spending fifty million dollars for roads. One-tenth of this sum would amply provide for all the feeble-minded at large in the state. It is not a question of the cost, but of presenting the facts to the people, and especially to our legislators, in order that they may appreciate the importance of segregation and the fact that it is the one and only method of coping with the problem.

Restricted marriage laws are no doubt advisable, but, as suggested by Hastings Hart, restricted marriage laws are unavailing because the unfit reproduce their kind regardless of marriage laws. Sterilization is at best a partial remedy, but is restricted in application by public sentiment. Legislation whereby institutions for the feeble-minded may hold their inmates regardless of the wish of the parents are of no avail unless we have ample accommodations for all of the feeble-minded who cannot be cared for and safeguarded in their homes.

My program for coping with the burden of the feeble-minded is a simple one: First, have the state provide colonies for all the feeble-minded who cannot be properly cared for in their homes, and then pass a law providing that any person who is feeble-minded may be committed to the colony as the insane are committed to institutions, and not released except by permission of some properly constituted authority.

A nurse working among the Russian refugees writes: "The snow here is very wonderful but monotonous, and the people are simple and primitive. The Russians make admirable patients, and are quite affectionate. They are easily pleased; some regard a clinical thermometer with awe, they never break them. One old man with an injury to his right ribs amused me by asking that the thermometer might be put under his injured arm; the other arm was all right, and it was not necessary to put the thermometer there. I humored him, and he assured me the pain was better after."—Nursing Times.

THE SONOMA STATE HOME FOR FEEBLE-MINDED AND EPILEPTICS

Industrial Training Successful With Both Boys and Girls—Tailoring, Shoemaking, Laundry Work, Dairying, and Plain Sewing Among the Industries Carried On—Institutional Care or Sterilization Important for Defectives

By WILLIAM J. G. DAWSON, M. D., Medical Superintendent, Eldridge, Cal.

THE Sonoma State Home, for the care and training of feeble-minded and epileptics who are not insane, was established at Santa Clara, Cal., in 1887, and moved to Eldridge, Cal., in 1893. We have about 1,670 acres of land.

Our institution has grown steadily until now we have 1,238 inmates. Included in this number are 320 epileptics.

The classification according to mental age of the number who have been tested by the Binet-Simon test is as follows:

Idiots	321	
Imbeciles	573	
Morons	283	
Border-line	5	
Normal	14	1,196

We have a school department consisting of ten teachers, with an educational director, who is also the psychologist, at the head. They are divided as follows: one teacher for kindergarten, one for grade, one for plain sewing (girls), one for tailoring (boys), one for music, one for band, one for gymnastics (boys), and one for recreation (girls). The children capable of being taught from books are sent to the kindergarten and grade departments.

In the manual training (sloyd) department some of our boys are doing very well. The boy, of course, must be interested in the work to profit by the training. This training will prepare the boys to work with the carpenters later. The boys in the tailoring department do well with simple sewing. This department has not been in operation long enough to prove how successful it will be.

The girls in plain and fancy sewing do exceedingly well. Since they are naturally inclined to these occupations, the training has been successful.

Our shoe shop, in charge of a paid shoemaker, is small and gives room for only a limited number of boys, but they do the entire mending of shoes for the home and put soles on bought uppers.

The boys in the laundry, the girls in the ironing room—in fact, all those doing industrial work—are making progress and are kept happy by their occupations. We find it necessary in some instances to change their occupations from time to time in order to keep them satisfied and contented. Each child needs careful observation and study to find out what work he or she is best adapted to.

We have not developed a farm colony plan. A few of our boys work on the farm and do good work; others work at the dairy; others with the poultry, while still others work in the vegetable garden, etc., all under the guidance more or less of paid help.

A few patients have gone out into the world, who have in a measure taken their places as self-supporting citizens, but the percentage is very small.

As will be seen from our classification, we have but few border-line cases, and those who have tested normal are either epileptics or probably psychopaths. The feeble-minded and epileptics should have institutional care so that they cannot propagate their kind. Sterilization has not been carried out to any great extent in this home. We do not feel that it is important for the patients who will probably remain here for life, but for those who will go out in the world again it is most important.

There is not much in a medical way to do for the mentally defective class, except to give them proper medical care and treatment when they are sick. Tonsils and adenoids have been removed in 123 cases, and, while the mental improvement may be very small, the general health has certainly been benefited by these operations.

Every patient admitted to this home is vaccinated and also has a blood test made. Positive Wassermann reactions are found in about 5 per cent of the population. In most of the positive cases the patients have received treatment, and as a result the greater number have remained negative for several years.

Most of our cases are custodial, and we try to make this a home with all that the name implies. Our aim is to make our inmates happy and contented—to make them feel that life in an institution is equal, if not superior, to life out in the world. The higher-grade girls and boys are the problems, as they are at times inclined to become discontented with institution life. This is probably true of all institutions of this kind in any part of the world—the higher the grade of mentality the more difficult it is to make the individual contented with his lot.

FLAVORING EXTRACTS, THEIR CHARACTER AND COMPOSITION

Official Standards for the More Important Flavoring Extracts—Adulterations Usually Affect Quality Rather Than Healthfulness—Analyses of Various Commercial Brands Found on the Market

By JOHN PHILLIPS STREET, Chemist Connecticut Agricultural Station, New Haven, Conn.

THE U. S. standards define a flavoring extract as "a solution in ethyl alcohol of proper strength of the sapid and odorous principles derived from an aromatic plant, or parts of the plant, with or without its coloring matter, and conforms in name to the plant used in its preparation."

Flavoring extracts are practically devoid of food value, yet it cannot be denied that their use greatly increases the palatability and attractiveness of a host of food products. The role they play in giving character and pleasant flavor to otherwise flavorless or insipid foods is an important one and renders them a by no means negligible factor in the preparation of dietaries.

Thousands of analyses of these preparations have been made since pure-food laws went into effect, and these analyses have emphasized the fact that the adulterator has been most active in manipulating these extracts. In rare cases injurious adulterants have been found, such as wood alcohol in lemon extract, or hydrocyanic acid in almond extract. Artificial colors have been and are widely used, and with certain types of extracts synthetic flavors have been the rule rather than the exception. Generally speaking, however, the adulterations have been those which affected the quality rather than the healthfulness of the extract. Common adulterations of this type are deficiencies in essential oil, the use of weak alcohol, the use of glycerin or sugar to give fictitious body to the extract, and the use of caramel in vanilla extract and turmeric or coal-tar colors in lemon and orange extracts to give an appearance of superior quality. Certain fruits, such as strawberries, raspberries, pineapples, and bananas, do not readily yield their flavoring principles to extractive processes, and until quite recently nearly all of the flavoring extracts bearing the names of these fruits have been of a synthetic character. In the last few years extracts of this type have appeared on the market in which the true fruit flavor was used, but the success and popularity of the process has yet to be demonstrated.

The U. S. authorities have formulated certain standards of composition for the more important extracts, and in general these have also been adopted by the various states. The average consumer has little knowledge as to the proper strength of a standard extract, and, as the labels on extract bottles are often purposely misleading and deceptive, it is important that the general public should possess this knowledge for its own protection. According to the regulations of many food authorities, a substandard article may be sold if the deviation from standard is stated on the label. Such information, however, often is of little use to the purchaser because of his ignorance of the proper strength of a good extract. For instance, a lemon extract bearing the label "Contains 3 percent of lemon oil," gives no warning to the consumer that the article in question is substandard unless he knows that true lemon extract contains 5 percent of lemon oil; with this knowledge the label would tell him at once that he was receiving a preparation of only three-fifths standard strength.

The following are the standards now in effect for the more important flavoring extracts, the minimum percentage of oil or flavoring principle alone being given:

Almond extract: One percent of oil of bitter almonds.

Anise extract: Three percent of oil of anise.

Celery extract: Three-tenths percent of oil of celery seed.

Cassia extract: Two percent of oil of cassia.

Cinnamon extract: Two percent of oil of cinnamon.

Clove extract: Two percent of oil of cloves.

Ginger extract: Each hundred cubic centimeters contains the alcohol-soluble matters from not less than 20 gm. of ginger.

Lemon extract: Five percent of oil of lemon.

Terpeneless extract of lemon: Two-tenths percent of citral from oil of lemon.

Nutmeg extract: Two percent of oil of nutmeg.

Orange extract: Five percent of oil of orange.

Peppermint extract: Three percent of oil of peppermint.

Rose extract: Four-tenths percent of attar of roses.

Savory extract: Thirty-five hundredths percent of oil of savory.

Spearmint extract: Three percent of oil of spearmint.

Sweet basil extract: One-tenth percent of oil of sweet basil.

Tonka extract: One-tenth percent of coumarin from the tonka bean.

Vanilla extract: Each hundred cubic centimeters contains the soluble matters from not less than 10 gm. of vanilla bean.

Wintergreen extract: Three percent of oil of wintergreen.

VANILLA EXTRACT

Of the above named extracts vanilla and lemon are by far the most important, judged by the extent of their use. Both of these types of extract

have been much adulterated in the past and are so even today, except that now as a rule they are more honestly labeled. Coumarin, the flavoring principle of the tonka bean, bears a close resemblance in flavor to the vanillin of the vanilla bean, lacking, however, some of the latter's delicacy and aroma. Moreover, with the vanillin are associated other resins in the vanilla bean which are not without value in the finished extract. On the other hand, those manufacturers who use tonka bean in their extract maintain that the flavor cooks out less from such an extract than from one made from the vanilla bean, and there is some justice in this contention. Until a few years ago there was a great disparity in the prices of tonka beans and the best vanilla beans, and accordingly there was a strong temptation for the manufacturer to use the cheaper product. Today this difference in price is less striking; in fact, tonka beans are more expensive than certain varieties of vanilla beans. Nevertheless, the consumer who wishes a pure vanilla extract has a right to expect that only vanilla bean has been used, and the regulations require the presence of tonka to be stated, whether it improves the extract or not.

In this connection it is well to call attention to the fact that the different varieties of vanilla bean show wide differences in quality and flavor. Accordingly, a vanilla extract may be made from genuine vanilla beans and yet be a very poor, but pure, vanilla extract. For this reason the ordinary chemical analysis of this product may be quite misleading, as some of the best vanilla extracts—best from the point of view of quality—contain much less vanillin than others of inferior quality. Furthermore, a synthetic vanillin, which of course was never associated with a vanilla bean, may have been used. This synthetic vanillin is chemically identical with the natural vanillin, but in the extract it is not associated with the other resins referred to above. Many analyses have shown that in a genuine vanilla extract the vanillin rarely exceeds 0.30 or 0.35 percent. Percentages much higher than these generally indicate the use of the artificial vanillin, and do not show superiority, as one might be led to believe from the analysis.

While, as has been pointed out above, a chemical analysis alone may be misleading as to the quality of a vanilla extract, the following table shows typical analyses of this extract made in my laboratory. The extracts classed as pure are all genuine extracts, varying, of course, in delicacy and aroma. The lower percentages of vanillin in certain brands by no means indicate inferior quality. The extracts classed as compound are either mixtures of tonka bean and vanilla bean extracts, or mixtures of synthetic vanillin and tonka bean extract, or even mixtures of synthetic vanillin and synthetic coumarin. In a number of instances it will be seen that the percentage of vanillin in these is far greater than that found in the pure extracts. This indicates the use of the synthetic vanillin and in no way betokens superior quality. This point must be emphasized in order that the consumer may not be confused by the rather misleading evidence of simple chemical analysis.

TABLE I. VANILLA EXTRACTS

Brand	Alcohol by vol.	Vanillin*, percent
PURE		
Baker's	25.86	0.17
Burnett's	25.13	0.23
Burton's	?	0.23
Colgate's	?	0.21
Foss'	33.16	0.19
Globe	24.61	0.24
Mayflower	?	0.22
Monarch	?	0.25
Price's	32.79	0.10
Republic	?	0.25
Royal Scarlet	?	0.18
Sage's	25.21	0.18
Sauer's	"	0.28
Van Duzer's	?	0.27
Van Dyk's	?	0.19
Williams'	20.50	0.22
Worth's	22.49	0.17
COMPOUND		
Arcadian	?	0.31
Atwood's	?	0.50
Boston	?	0.58
Clinton's	15.06	0.05
Delmonico	30.27	0.06
Doyle's	?	0.60
Forest City	7.53	0.06
French's	24.75	0.06
Lanman's	13.59	0.40
O. K.	?	0.12
Sovereign	?	0.87
Walsh's	17.32	0.68

Brand	Coumarin, percent
COMPOUND	
Arcadian	0.09
Atwood's	0.05
Boston	0.12
Clinton's	0.11
Delmonico	0.05
Doyle's	0.10
Forest City	0.23
French's	0.04
Lanman's	0.10
O. K.	0.12
Sovereign	0.09
Walsh's	0.15

*No coumarine present.

LEMON EXTRACT

With lemon extract there is also an important point to keep in mind. Lemon oil consists of about 95 percent of terpenes and 5 percent of the aldehyd citral. These terpenes are soluble only in fairly strong alcohol, while the citral is soluble in quite dilute alcohol. If, therefore, a quantity of lemon oil is agitated with weak alcohol, only a small part of its substance will be extracted by the solvent, the terpenes, the body of the oil, remaining almost unaffected by the dilute alcohol. Such a method of preparation gives us the so-called "terpeneless" extracts, which have the smell of a lemon extract without its body and quality. As, under normal conditions, the alcohol is the most expensive ingredient in a lemon extract, the temptation to the manufacturer to use the weaker alcohol is a strong one, and accordingly our markets are flooded with these terpeneless, attenuated extracts. The consumer should remember that the word "terpeneless" on the label of these extracts is the warning the law affords to protect him from these inferior preparations.

Table II gives analyses of typical lemon extracts made in my laboratory. The range in composition of the genuine extracts is quite wide, namely, from 5.10 to 10.95 percent of lemon oil. The alcohol percentages likewise are extremely

variable, and it is obvious that some manufacturers use stronger alcohol than is necessary, and actually waste considerable of this expensive ingredient. Seventy-five percent alcohol apparently is sufficient to keep even 10 percent of lemon oil in solution.

The analyses of terpeneless lemon extracts clearly show their character. They contain no lemon oil and varying amounts of citral (not determined in the samples herewith reported) generally averaging about 0.2 percent. The percentages of alcohol reported show the great saving in the solvent possible in extracts of this character. While in genuine lemon extract the alcohol ranged from 72 to 90 percent, in the terpeneless extracts the range was from 12 to 47 percent.

The insolubility of lemon oil in weak alcohol affords the consumer a simple test for determining whether or not the extract he is using contains lemon oil or is one of the terpeneless variety. If three volumes of water are added to one volume of the extract, in the case of genuine extracts the mixed liquids will have a cloudy appearance, while with a terpeneless extract the liquid will remain practically clear.

TABLE II. LEMON EXTRACTS

Brand	Alcohol by vol.	Lemon oil
GENUINE		
Baker's	83.51	6.48
Baker's	77.21	4.30
Burnett's	85.37	9.80
Burnett's	88.42	10.60
Colgates	82.02	8.16
Crown Aster	80.96	4.20
Foss'	79.83	9.40
Foss'	85.47	9.20
Harris'	85.48	5.84
Health Brand	80.49	6.10
Mayflower	86.26	5.20
McKee's	76.71	10.95
McKee's	72.15	6.37
Monarch	80.85	5.56
Miller's	84.24	6.70
Polo	88.84	5.10
Price's	76.51	6.54
Republic	90.25	5.90
Sauer's	79.70	6.50
Van Dyke's	73.79	5.94
White Rose	81.77	6.50
Williams'	84.63	5.90
Worth's	81.42	5.20
TERPENELESS		
A. and P	23.00	0
Arthur's	44.42	trace
Boston	33.83	0
Centennial	22.83	0
Coe's	16.55	0
Cotton's	43.95	0
East India	24.31	0
Eureka	47.70	0
Gross'	12.29	0
O. K.	22.38	0
St. John's	32.08	0

GINGER EXTRACT

Experiments by me have shown that a standard ginger extract should contain at least 90 percent of alcohol and from 1 to 2 percent of solids, practically all of which should be soluble in alcohol and not over 15 percent of which should be soluble in cold water.

Table III gives typical analyses of this extract made by me. In certain brands it will be seen that relatively large percentages of water-soluble solids are shown, indicating the use of sugar or molasses, either alone or combined with glycerol; in these extracts the percentages of alcohol are relatively low. The genuine extracts, on the other hand, contain somewhat over 90 percent of alcohol, and only small proportions of the solids are soluble in water. As a matter of fact, the dilute ginger extracts are more often used in certain prohibition areas as a tipple than as flavoring extracts. The ginger solids present are hardly sufficient to interfere with their use as a beverage, being, in fact, attractive to certain jaded palates, and the alcohol content ranges from the full amount to half that usually shown by whisky.

TABLE III. GINGER EXTRACTS

Brand	Alcohol by vol.	Alcohol-soluble solids	Water-soluble solids
Benefit	65.75	1.73	0.47
Colburn's	92.41	0.94	0.36
Colton's	75.87	1.54	1.27
Colton's	21.35	0.63	3.57
Goodhonest	24.15	0.43	0.52
Grand Union	91.41	1.56	0.09
Hudson Imita'n.	48.55	1.20	6.08
Littell's	94.38	1.03	0.26
McKee's	95.00	0.52	0.07
Sauer's	91.00	1.66	0.13
Seeman's	35.93	0.21	1.97
Stuart Brand	38.07	0.86	9.72
Van Duzer's	90.15	1.71	0.18
Van Dyk's	66.70	4.50	4.48
Williams'	93.37	1.72	0.39
Made in laboratory*	94.63	1.42	0.21
Made in laboratory†	93.21	1.81	0.16

*From Jamaica ginger.
†From African ginger.

MISCELLANEOUS EXTRACTS

Table IV shows analyses made by me of almond, celery, cinnamon, clove, orange, peppermint, rose, spearmint, and wintergreen extracts. All of these given are of standard quality, many, in fact, containing much more of the essential oil than the standards require. Certain of the extracts, notably almond, indicate a great wastage of alcohol, as much more of the solvent is used than is necessary to keep in solution the required quantities of oil.

TABLE IV. MISCELLANEOUS EXTRACTS

Brand	Alcohol by vol.	Essential oil
ALMOND		
Baker's	34.25	1.18
Burnett's	49.45	2.33
Crown Aster	28.79	1.17
Foss'	75.32	1.38
Riker's	78.16	1.00
Robin Hood	40.73	3.85
Sunbeam	45.95	1.37
Tiger Head	46.75	1.50
CELERY		
Bibeau's	89.60	1.40
Burnett's	93.65	0.71
CINNAMON		
Burnett's	91.49	2.33
CLOVE		
Burnett's	94.02	1.91
ORANGE		
A. and P.	83.83	5.50
Burnett's	88.10	9.00
Cabinet	76.18	6.60
Foss'	85.88	8.40
Imperial	88.77	6.00
Sauer's	76.89	6.60
Slade's	81.42	10.70
Van Duzer's	84.74	6.60
White Rose	87.70	5.70
Williams'	80.87	6.50
PEPPERMINT		
A. and P.	77.30	3.40
Benefit	70.00	4.00
Colton's	69.00	3.80
Sauer's	64.00	11.40
Williams'	66.92	3.20
ROSE		
Burnett's	92.50	0.38
Colton's	88.85	0.47
Leggett's	89.65	0.37
SPEARMINT		
Colton's	87.30	3.00
WINTERGREEN		
A. and P.	61.60	3.43
Baker's	?	2.91
Benefit	54.60	3.51
Burnett's	82.85	5.00
Colton's	50.45	3.65
Sovereign	67.40	4.12

Every new day is a fine and interesting adventure. Meet it with hope, with cheerfulness, and without anxiety. —Kansas State Board of Health.

STANDARDIZATION OF HOSPITALS—THE UNIVERSITY OR TEACHING HOSPITAL*

Class I, Under the Schedule, Is the Most Important of All Institutions, and Its Responsibilities Are Great—The Departments and the Items to Be Measured—The Difficulties of Marking in Percentages—Hospital People Invited to Participate in Creating Forms for Standardization

By JOHN A. HORNSBY, in Collaboration with MISS MARY WHEELER, Principal of the Illinois Training School, Chicago; DR. SOLOMON STROUSE, Former Pathologist in and now Member of the Medical Staff, Michael Reese Hospital, Chicago; MISS RENA S. ECKMAN, Former Dietitian, Massachusetts General Hospital, now of Teachers College, Columbia University, New York; DR. J. T. CASE, Roentgenologist, Battle Creek, Mich.; DR. E. BLAINE, Roentgenologist, Cook County Hospital, Chicago; MR. E. C. LARSON, Former Accountant, now Assistant Superintendent, Michael Reese Hospital, Chicago; MR. MICHAEL M. DAVIS, Jr., Director, the Boston Dispensary, Boston, Mass.

THE reason why we chose to set out upon our attempts to create some hospital standards by making the university or school hospital Class I was that this particular institution should be an example for all others. The teaching hospital will differ from all other hospitals in many details, and we will require of the teaching hospital higher standards in many directions than we have a right to exact of others.

It will necessarily be extremely difficult to evaluate a teaching hospital for the reason that opinions will differ radically as to the relative importance of various features, one class of experts —namely, the teachers in the schools—taking the ground that the teaching side, including architecture, equipment, and service, is the all-important thing, while hospital administrators will always feel that the cure, care, and comfort of patients outweighs everything else. In fact, any attempt to standardize the teaching hospital must revivify the old classic controversy as to whether the medical men in the hospital are to run the institution or whether its affairs shall be managed by a board of lay trustees acting through an executive. In most teaching hospitals this problem has been well solved by having a medical man as superintendent; and in a few instances trustees of the school are elected to the hospital board, or vice versa, and in that way the activities of the two institutions are coordinated. That seems an excellent solution.

But, however important we may regard the teaching features of a hospital affiliated with a medical school, we shall never lose sight of the fact that it is a hospital—a place in which to take the highest order of care of the sick, and the moment this one thought is allowed to be displaced from the first consideration we lose the very fundamental purpose of the school's own work—namely, to teach young men and young women to cure and nurse the sick as the work should be done in the interest of the patient. One hardly considers it good hospital practice or good student training, for instance, for a surgeon to prolong a surgical operation to dilate upon some point in the procedure.

We had intended in this paper, dealing as it does with the most important of all hospital classes, to elaborate in great detail on the various features, and to suggest just exactly what Class I hospitals should be and do and have; but we find that the material would far overrun the space allowed in one issue, and we have therefore decided to measure our hospital out into departments, and to fix some rather arbitrary percentages by which to judge of its merits. There will be those who will differ from the values we have given to various departments; indeed, we who have undertaken to collaborate in attempting this work have differed among ourselves; but compromise is the fairest basis of settlement of any difficult problem, and we can only urge all those who differ from us to write in and give us and the hospital people the benefit of their judgment. It may be frankly stated that the classification as we published it in the April number was not recognizable as the original which we prepared; it was radically changed, as many as twenty-five of the hospital people having had a hand and an influence in molding it into its present form. It will be most interesting and a very great help if many of the hospital people will send us in other forms for the standardization of this class of hospitals. We are, at best, only suggesting a framework upon which the whole hospital people may build something of permanent value.

As stated, we realize that different opinions may be held as to the departmental divisions of what we have termed Class I institution, but it is hoped that, by a comparison of the divisions that may be advanced, a practical and acceptable arrangement will be developed.

*This is the second in a series of papers on "The Standardization of Hospitals." Next month's paper will go into details of what the university school hospital should be and do and have, so that it may be adjudged under the schedule published in this issue.

DIVISIONS OF THE HOSPITAL INTO DEPARTMENTS

No. of department.	Percentage allowed.	Name of department.
1	40	Medical staff, including resident staff and training school.
2	10	Laboratories—all branches.
3	5	X-ray department.
4	5	Dietetic department.
5	5	Pharmacy.
6	5	Dispensary, out-patient, and social service.
7	10	Medical records and accounting.
8	5	Architecture, including all permanent installation.
9	10	Equipment—medical, surgical, and physical.
10	5	Administration—all departments.

MEDICAL STAFF:

Total percentage allowed, 40 percent.

20 percent.
- Attendants:
  - Personnel of staff.
  - Completeness of the scheme of organization.
  - Responsibility of the staff heads.
  - Simplicity of the organization.
  - Team-work.
  - Original work, investigation, and publications.

5 percent.
- House staff:
  - Personnel.
  - Plan of organization.
  - Discipline.
  - Team-work.

15 percent.
- Training school:
  - Board of control.
  - Superintendent.
  - Heads of departments.
  - Personnel of nursing service other than above.
  - Services—day and night, etc.
  - Teaching, curriculum, classes, lectures, etc.
  - Discipline.
  - Living conditions—home, social, religious, etc.
  - Records.
  - Study in human waste in schools for nurses.

THE LABORATORIES:

Total percentage allowed, 10 percent.
- Comprehensiveness of scheme of organization, considering dual purpose.
- Personnel of director and associates.
- The scientific atmosphere of hospital under inspiration of laboratories.
- Physical equipment.
- Architectural arrangement of space.
- Original work and publications.

X-RAY DEPARTMENT:

Total percentage allowed, 5 percent.
- Comprehensiveness of the organization.
- Personnel—director and associates.
- Architectural arrangement of space.
- Equipment.

DIETETIC DEPARTMENT:

Total percentage allowed, 5 percent.
- Scope of work.
- Personnel—director and associates.
- The general kitchen.
- The diet kitchen.
- Ward diet kitchens.
- Serving rooms.
- Dining rooms.
- Menu plans.
- Team-work with other departments.

THE PHARMACY:

Total percentage allowed, 5 percent.
- Plan of the organization.
- Personnel—director and associates.
- Plan of distribution of medicines.
- Facilities for cooperating as a teaching agency.
- Architectural arrangement, main drug rooms, floor cabinets, and scheme of transportation.

DISPENSARY, OUT-PATIENT, AND SOCIAL SERVICE:

Total percentage allowed, 5 percent.
- Scope of work.
- Personnel—medical staff, director, and associates.
- Record-keeping system.
- Team-work with other departments.
- Architectural arrangement of spaces.
- Management and discipline.

MEDICAL RECORDS AND ACCOUNTING:

Total percentage allowed, 10 percent, divided between records and accounting.
- Comprehensiveness of plan as a whole.
- Completeness of plan of records for medical service.
- Simplicity of accounting system.
- Cohesion and cooperation between records and accounting.
- Value of medical records for purposes of statistics and literature.

ARCHITECTURE, INCLUDING ALL PERMANENT INSTALLATION, SUCH AS PLUMBING, STEAM FITTING, POWER PLANT, ELEVATORS, VENTILATION, VACUUM CLEANING, LAUNDRY, SEWAGE AND GARBAGE DISPOSAL:

Total percentage allowed, 5 percent.
- Plan of the hospital as a whole.
- Execution of details.
- Taste and harmony of parts—ornamentation.
- Materials used in the building.
- Materials employed in permanent installation.
- Plans of arrangement of operating suite, kitchens and auxiliaries, laundry, etc.
- Economy of operation.

EQUIPMENT—MEDICAL, SURGICAL, AND PHYSICAL:

Total percentage allowed, 10 percent.
- Completeness of regular surgical apparatus and furnishings.
- Special apparatus for doing unusual technical operations—splints, water and air beds, hoists, pulleys, extension apparatus; made-up boxes for special operations, such as venesection, spinal puncture, etc.
- The furniture of the hospital—all departments.

MANAGEMENT:

Total percentage allowed, 5 percent.
- Scheme of organization for cooperation of scientific with domestic departments.
- Personnel—superintendent and department heads.
- General scheme for handling the public.
- General scheme for handling the staff.
- General scheme for handling the patients.
- General scheme for handling the trades people.
- General scheme for handling the employees.
- Arrangements for housing help necessary to be kept on premises.
- Cleanliness and order in the hospital.

St. Jerome's Hospital, a new institution, will soon be opened at Batavia, N. Y., by the Sisters of Mercy of the Buffalo diocese. The building is a bequest to the sisters from Miss Mary Rose Jerome, of Batavia, who died about a year ago.

INSTITUTIONAL ECONOMIES FOR WAR TIME

The Burke Foundation of New York and Presbyterian Hospital, Chicago, Are Revising Their Food Administration Successfully—Economies in Surgical Supplies in the New York Hospital for Ruptured and Crippled—Expensive Articles Cut Out—Study of Psychology a Necessity

ECONOMY, which is always an important element in hospital administration, has lately become a patriotic duty as well. The methods used by various hospitals to conserve supplies of food and other articles have therefore a peculiarly timely interest just now. THE MODERN HOSPITAL is glad to present some plans for economy which have been successfully worked out in three hospitals, the Burke Foundation, White Plains, N. Y.; the Presbyterian Hospital, Chicago; and the New York Hospital for Ruptured and Crippled. Mr. Walter E. Wright, assistant superintendent of Burke Foundation, and Mr. Asa S. Bacon, superintendent of the Presbyterian Hospital, have been good enough to furnish us with accounts of some of the methods used in their institutions.

Food Economies at Burke Foundation

BY WALTER E. WRIGHT.
Assistant Superintendent Burke Foundation, White Plains, N. Y.

The Burke Foundation foresaw and anticipated the difficult and testing war conditions for institutions with fixed or receding incomes, and began reforms and graduated reductions more than a year ago. The institution was on a war basis before war was declared. Actual and relative reductions of its fixed income have thus been offset, and a surplus to meet emergency extensions in war and Red Cross service is assured. Without this early and essentially radical effort the conditions would now be unfortunately reversed. Of course, economies and curtailments in other departments accompanied the food changes.

Results may be summarized as follows: increase in food costs, 40 percent; increase in cost of meat, fish and fowl, 31 percent; despite this the food per capita has been held down to a 12-percent rise only, and the total expended for meat, poultry and fish has increased but 7 percent—in the face of an 8-percent addition of "days' treatment" in the period. Weight gains and all the other evidences of health-building appear even better than the year before. Contentment and enthusiastic support of patients and employees are constant and gratifying.

Some of the methods: Brief, plain talks on food values, abuses and common sense have been given by the superintendent in assembly; instructive and explanatory notices have been bulletined, preceding changes. New York City has been justly held up as the worst food-biased and food-wasting community in the world. Meat consumption has been cut nearly in half with extensive use of beans and cheese, peas, peanut butter, etc., for the protein; butter reduced, with cottonseed oil and margarine increasingly used. We have been making "war bread" for two years past; it is liked best of all. Left-over dark cereals go into brown bread, light cereals into light bread. Stale bread and cake are ground and enter the newly-baked loaves, respectively. Corn meal is added increasingly to all of the loaves, and used extensively in muffins and as cereal, etc.

Milk remains a fairly cheap food, but unless firmly supervised it is drunk mostly by the very persons not needing it (a milk axiom). We give it on prescription only to chosen patients; a large quantity is used, but with the satisfaction of knowing that it goes to the right spots.

Potatoes are served but three times a week since they became an expensive starch-food, and with skins on; mashed potatoes proved most extravagant and were omitted; unpolished rice is much substituted. Oatmeal and corn are the main cereals. Cabbage has been discontinued, and spinach or sauerkraut with corned beef served very successfully; fried foods much lessened, and tarts and pies nearly eliminated. Spaghetti with cheese is a standby. Apples, bananas, prunes, and rhubarb are mainstays in their line of diet.

At our colored branch, molasses replaces butter at one meal, with corn a staple all through the diet. At the boys' branch a rich gravy takes the place of butter frequently, and the pampered city lads who say they can't eat corn, rice, etc., are let go hungry till they learn food-sense; ten hours suffices. With them practically one dish only often makes the meal.

Reduction in the number of different things per meal, with smaller portions served and understanding that more may be asked for, has saved and satisfied. Regular inspection of garbage and of used plates gives continuing basis of criticism and betterment. Gains were made by having men's food differ somewhat from the women's.

The nine thousand convalescent persons have come to us more or less deviate on food questions. Their education away from fear and crankiness and food-foolishness, toward simplicity, economy, and a sane unconcern as to diet, has been no small part of the achievement here. The proof is that "it has worked"; patients thrive and are made happy, and they continue to practice our food ways at their homes—and to thank us for the lessons.

The following is used as a poster about the institution as a reminder to staff, help, and patients:

THE FOOD QUESTION IN THE FOUNDATION

In war time, the income of the Burke Foundation may be reduced. Food prices are rising steadily. We do not wish to cut down employees or patients. Food economies will help us to avoid this.

You eat too much meat. Your health and efficiency will be better with half the amount. Cheese, beans, and peas carry the same food elements as meat, and should more often take its place.

Corn, oats, rice (and potatoes, when cheaper) are equal with wheat flour. Margarine and peanut butter are often as good or better than much of the butter we can get.

We eat too many kinds of food at a meal. The people who do most in the world, and last longest, live plainly. Bread and milk, or bean soup with bread, or spaghetti-cheese are each, for example, complete foods for one meal.

We believe you will be glad to cooperate now in right food reforms—learning valuable things for life—with bettered health and success.

DR. FREDERIC BRUSH, Superintendent.

Some of the menus at the Foundation, including the newer, more popular, and certainly more inexpensive articles, are given below:

MAY 8

Breakfast

Cream of wheat
Eggs in cream
Coffee Cocoa

Lunch

Lamb stew Vegetables
Lima beans
Boiled rice

Supper

Vegetable soup
Corn fritters Maple syrup
Vanilla cake
Stewed peaches
Cocoa Tea

MAY 12

Breakfast

Cream of wheat
Eggs in cream
Coffee Cocoa

Lunch

Hungarian goulash
Green peas
Boiled rice
Cabinet pudding
Tea

Supper

Chicken broth, rice
Baked beans
Stewed peaches
Currant cake
Cocoa Tea

MAY 16

Breakfast

Wheatena
Chipped beef in cream
Bread and butter
Coffee Cocoa

Lunch

Pot roast
Green peas
Ringed potato
Chocolate ice cream
Tea

Supper

Noodle soup
Rice creole
Stewed prunes
Gingerbread
Cocoa Tea

MAY 18

Breakfast

Hominy
Boiled eggs
Bread and butter
Coffee Cocoa

Lunch

Fried cod
String beans
Boiled potato
Rice pudding
Tea

Supper

Black bean soup
Creamed codfish
Stewed pears
Currant cake
Cocoa Tea

MAY 26

Breakfast

Hominy
Eggs in cream
Bread and butter
Coffee Cocoa

Lunch

Scallions
Baked halibut
String beans
Boiled rice
Tapioca pudding
Tea

Supper

Chicken broth, rice
Baked beans
Stewed rhubarb
Vanilla cake
Cocoa Tea

MAY 28

Breakfast

Wheatena
Roast beef hash, peppers
Bread and butter
Coffee Cocoa

Lunch

Corned beef and spinach
Boiled potato
Rice pudding
Tea

Supper

Scotch broth, barley
Spaghetti
Cheese
Stewed prunes
Currant cake
Cocoa Tea

MAY 29

Breakfast

Hominy
Scrambled eggs
Coffee Cocoa

Lunch

Pot roast
String beans
Ringed potato
Vanilla ice cream
Tea

Supper

Split pea soup
Rice creole
Currant cake
Stewed rhubarb
Cocoa Tea

MAY 31

Breakfast

Oatmeal
Corned beef hash, peppers
Bread and butter
Coffee Cocoa

Lunch

Roast beef, brown gravy
Succotash
Boiled rice
Cabinet pudding
Tea

Supper

Consommé rice
Macaroni-cheese
Cocoanut cake
Stewed prunes
Cocoa Tea

Since the most carefully devised plans for economy are going to fall short of the desired results unless they have the willing and intelligent cooperation of employees and patients, it is most important to lay a foundation of understanding. The excellent results reported by Mr. Asa S. Bacon, of the Presbyterian Hospital, Chicago, are therefore full of instruction.

Cooperation of Physicians, Nurses, and Patients Enlisted Successfully in the Presbyterian Hospital, Chicago

BY ASA S. BACON,
Superintendent of the Pennsylvania Hospital, Chicago.

In order that everyone in the hospital may understand the reason for careful economy in food, the following notice has been posted in every room in the Presbyterian Hospital:

NOTICE

The shortage of the food supply of this country is a well-established fact. The attention of the public has been called to it by President Wilson. Unless there is a general response on the part of the entire country, so that every effort shall be made to reduce consumption of food and eliminate waste, still greater scarcity than now exists and higher prices are inevitable. For the sake of doing our part in carrying on the war, and particularly that there may be more abundant food supply and lower prices for our people, everyone must be able to assist. The administration of this hospital desires to do its part. For that purpose, all nurses will be held to strict accountability to the end that all articles not necessary for the welfare of our patients shall be omitted from the trays. A menu will be furnished daily in advance from which selections can be made, and we earnestly request the cooperation of all our doctors, nurses, and patients in the endeavor to be of assistance to our country at this time.

ASA S. BACON, Superintendent.

Menus are furnished for each patient, and the patient or nurse is requested to draw a line through the name of food not desired. Since the introduction of this plan, only a few of the patients have asked for food not on the menu card. In the case of patients on diet the physician, of course, still orders the food which may be necessary, if it is not on the menu, but he is careful not to do this unnecessarily. In fact, a wonderful spirit of cooperation has been evidenced among patients, doctors, and nurses. The saving in food may be very conservatively estimated at not less than 10 percent.

The accompanying sample menu shows how we have attempted to maintain a dainty and appetizing choice of foods with comparatively few nutritious yet inexpensive articles:

MAY 9-10

Breakfast

Grapefruit
Oatmeal Eggs
Hot bread Coffee

Dinner

Cream of celery soup
Roast beef
String beans Boiled rice
Cress salad or grapefruit salad
Cherry ice cream or blanc mange and jelly

Supper

Cereal
Spaghetti italienne
Peach salad
Strawberries with drop cakes

Draw line through food not desired.

The following notice, posted up in the New York Hospital for Ruptured and Crippled, offers some admirable suggestions for economy in the use of surgical supplies:

WAR ECONOMIES

SUPPLIES OF ALL KINDS ARE COSTLY—DO NOT WASTE

1. The good will and cooperation of the physicians and surgeons, both ATTENDING and HOUSE, is requested to bring about economic use of drugs, appliances, and supplies.

2. Nurses and attendants will collect all gauze and bandages from ward dressing, operating rooms and outpatient department in bags set for that purpose.

3. To Whom It May Concern: Do not use two pounds of plaster where one pound only is necessary.

4. Do not use an appliance or a surgical instrument, except for the purpose for which it is intended.

5. Save the worn-out article or the broken in order to obtain a new one on requisition.

6. Do not light an electric lamp when not necessary. To do otherwise is wasting money.

7. All lights not actually necessary must be extinguished by 9 p. m.

8. Do not use the printed blanks of the hospital for any other purpose than for which they are designed. BLANK FORMS COST MONEY.

9. Old rubber is valuable. Don't throw any away. Keep rubber in a cool place. Don't allow any form of grease on rubber, as it causes it to rot.

10. Do not take the elevator to go up or down one or two flights of stairs.

VIRGIL P. GIBNEY, M. D., Surgeon-in-Chief.

May 7, 1917.

RECLAIMING USED GAUZE AND COTTON

The Pennsylvania Hospital Finds Saving of Sixty-five Percent—The Method Employed—Dressings Properly Washed Aseptic Before Sterilization

BY DANIEL D. TEST, Superintendent of the Pennsylvania Hospital, Philadelphia.

So much has been said on the subject of the reclaiming of gauze and other surgical dressings that I hesitate to speak of it now, and yet it does seem very important, not only from a financial viewpoint, but in line with the present need for conservation, that all publicity possible should be given to the subject. I shall, therefore, give a concise description of our method of reclaiming. I think many hospitals make a mistake in thinking that it will not pay them to try to reclaim their surgical dressings. However small the hospital may be, I am sure it would be worth while to reclaim their gauze in these times of high prices especially. While a sterilizing washer is a very desirable piece of apparatus for any hospital to have, it is not necessary for the proper reclaiming of surgical dressings. Experiments which we have made would indicate, beyond doubt, that dressings washed in the ordinary washer with boiling water and then properly sterilized in the clinic, are entirely sterile. Any hospital undertaking to do the work in this way, however, should have the pathologist make careful examinations to determine whether the process used is really effective.

At the Pennsylvania Hospital we are realizing a saving of over 65 percent, and this, at the present time, means a handsome sum every month. For instance, we used only 55,000 yards of gauze last year, whereas, without reclaiming, 200,000 yards would be a small estimate. We also used only 700 pounds of absorbent cotton, other than the waste cotton, and this was almost entirely used in the eye clinic.

The method of having the gauze examined, trimmed and prepared by the nurses, under the class supervisor, seems to have many advantages over the method of having this work done by maids or by the laundry people. In addition to the valuable training which our nurses get in their probation period, we have realized a much larger saving.

The soiled dressings are collected at the bedside, in low-priced, 20-pound, automatic paper bags, held in position by home-made frames. Immediately after the surgical dressings are completed, the bags are taken to the laundry, where the dressings are transferred to net bags, and placed in cold water in the soaking tank. This water is changed three or four times during the day. The following morning the net bags containing the dressings are transferred to the sterilizing washer, and washed by the following process:—

1. Two cold-water washes, without soap or alkali, for ten minutes each.

2. Forty-five minutes' washing in hot water and soap solution.

3. Two rinsings in hot water for ten minutes each.

4. After small amount of hot water is placed in washer, the cylinder is run for forty-five minutes under steam pressure of 12 pounds.

After the dressings are put through the extractor, they are taken, while moist, to the gauze room, where they are stretched, trimmed, and prepared for final sterilization by the probation class of the training school, under the class supervisor. Preparation and sterilization of dressings is taught at same time. The class hour is sufficient.

The trimmings, worn-out pieces, and pieces of gauze bandages are saved until a considerable quantity has been collected, and are then sent away to be picked and carded for absorbent cotton. The amount of gauze cotton thus secured nearly equals the amount of absorbent cotton required.

Dressings properly washed are entirely aseptic before the final sterilization in the gauze room and, after final sterilization, could be used for any purpose, but as a matter of convenience the new gauze is first used in the operating rooms.

The dressings are first cut large and of uniform size, and as they become smaller, as a result of washing and trimming, they are placed in the next smaller size. Four sizes are convenient for nearly all dressings.

Where the gauze is to be reclaimed, a cheaper quality than a heavy 24-by-28 count is not economical. Muslin bandages are washed and ironed, but it does not seem practicable to iron gauze bandages; hence they are used as waste.

Most manufacturers of cotton waste do carding, but if location makes this impracticable, a picker may be purchased and the waste used without carding. While carding is very desirable, a carding machine is expensive.

RECENT OHIO LEGISLATION ON INSTITUTIONS

Scope of Tuberculosis Hospitals Enlarged—Constructive Program for Institutional Care of Feeble-Minded Adopted

BY HOWELL WRIGHT, Secretary of the Cleveland Hospital Council, Cleveland, Ohio.

Important changes were made by the Eighty-second General Assembly of Ohio in the state laws affecting public control of tuberculosis. All reference to "pulmonary" tuberculosis was eliminated, and in the future public tuberculosis hospitals will be authorized to admit all cases of tuberculosis, glandular, bone and otherwise. Emphasizing "prevention," the new law extends permission to county commissioners to establish one or more free tuberculosis dispensaries in each county. This is the next logical step in the Ohio campaign against tuberculosis and will reinforce the work of the various tuberculosis hospitals and public health nurses.

In justice to the injured workmen as well as to hospitals and doctors of the state, the legislature amended the workmen's compensation act by providing additional compensation for hospital, medical and nursing service. In the original law the amount of compensation for such service was limited to $200. This limitation necessitated much

"charity" work for the state on the part of both hospital and physician. The amendment provides that in unusual cases additional amounts may be paid at the discretion of the commission for necessary medical, nursing and hospital service. While reliable figures show that the number of hospital cases requiring additional compensation does not exceed one in a thousand, the amendment removes an injustice of long standing and makes Ohio's compensation act the best in the country from the standpoint of medical practice and hospital service.

A constructive program for institutional care of the feeble-minded was put through. The sum of $250,000 was appropriated for the building of five cottages in 1917, accommodating 300 patients, and six cottages in 1918, accommodating 350 patients, at the Institution for the Feeble-Minded, as well as $25,000 for a tuberculosis hospital at the same institution.

Appropriations were also made for five cottages, accommodating 300 patients, to be built at the Hospital for Epileptics. The Ohio Penitentiary Commission was granted $350,000 for additions and improvements at the new prison farm at London. An appropriation of $114,000 was made for the building and equipment of an administration building to be used by the Bureau of Juvenile Research. This bureau, which is one department of the Board of Administration, will make use of this new plant, which may be properly called a laboratory, in examining all juvenile delinquents committed to the custody of the board. These examinations are to determine what physical and mental defects, what hereditary and environmental influences have affected each child, to the end that he may be permanently restrained or properly trained for citizenship.

MEN NURSES IN CHINA

Advantages of Employing Men—Good Qualities Displayed by Chinese Male Nurses

Trained nursing is naturally a novelty in China. It would appear that men nurses are likely to prove quite as successful in that country as women.

Miss Hope-Bell, of Hankow, president of the Nurses' Association of China, is quoted in the *British Journal of Nursing* as saying:

"It is becoming increasingly evident that trained Chinese men nurses have come to stay. Some people have looked upon them as but temporary expedients, only to be made use of until such time as the better education of women, and progressive changes in etiquette should allow of women nurses caring for men patients, as in the homelands.

"But why should they not be found permanently in our hospitals for men? Surely men are physically better fitted to lift and turn men patients than are Chinese young women. And they are proving to be as tender-hearted and as gentle-handed as their sisters, and equally capable in every way.

"At present, experienced women nurses are few. Hospitals for women are staffed mainly with girls, the majority of whom marry as soon as the certificate is gained, and so disappear from the ranks of the profession just when they are becoming experienced. This leakage of useful workers should not be found to any extent in our training schools for men. Of the educated youths who are taking up the work nowadays, the majority are prepared to make nursing of the sick their life work, and in that fact lies the possibility of getting really experienced as well as skilled and capable men for posts of responsibility later on."

Mary Davis Lewis, in the *Trained Nurse and Hospital Review*, also writes of experiences with men nurses. She says:

"Many boys from our mission schools finish the grammar grades and cannot afford to go on; from this source we draw our best material; they are usually Christians, more or less used to foreigners, and have a good preliminary education. Yet one of my seniors was once an apprentice to a carpenter; now he is a really excellent nurse: neat, gentle and trustworthy, he is thoroughly at home in the operating room, and especially enjoys eye work.

"The Chinese boy nurse, as I have found him, is reasonably kind, pleasant, and trustworthy; supported by his long blue gown, which stamps him as above the coolie class, and the honorable title of 'hsein sheng,' he will dress the most dreadful wounds without flinching, and plod through laborious days, but if the patient is impudent—well, he had better look out. One nurse, the ex-soldier, asked, 'What is the patients' worst fault: smoking against rules, swearing at the nurse, or spitting on the floor?' I replied that the first two were faults, the latter a crime. Under some dreadful circumstances murder may be justified, stealing at times is to be pardoned, as to the other lapses we are all mortal; but spitting on the floor is the one crime without excuse or pardon."

INSTITUTIONAL CARE FOR THE FEEBLE-MINDED IN NEW YORK

New York State Falling Behind in Making Provision for the Feeble-Minded—Outdistanced by Four Other States

The New York Committee on Feeble-Mindedness says that New York State is losing ground in making provision for the feeble-minded. In 1890 there were (on the basis of 1 to every 300 of the population) 20,992 feeble-minded in the state. Institutional provision was made for 770 of these, leaving at large 20,222. In 1917, the population having increased well over 50 percent, there is a total of 33,000 feeble-minded throughout New York.

Nearly 5,500 of these are provided for in institutions specially designed for them, and about 4,500 in institutions not designed for their care. This leaves at large in the state approximately 23,000 feeble-minded. The number at liberty in the community is about 4,000 more than it was in 1890.

New York State, moreover, it is said, does not compare well with other states in making provision for its feeble-minded and epileptic dependents, and every year it is running further behind, until it now stands thirteenth in the ratio of state provision for the epileptic, and eighth in provision for both. Or, if we include the New York City institution on Randall's Island, for which, of course, the state can take no credit, it stands fifth in all three particulars, being outdistanced by Massachusetts, Ohio, Minnesota, and Iowa. State provision increased 42 percent from 1904 to 1910 and only 29 percent from 1910 to 1916.

It is estimated that, of the 33,000 feeble-minded in the state, 10,000 are girls and women of child-bearing age, of whom only about 2,100 are cared for in institutions designed for the care of the mentally deficient, while about 1,300 are confined in reformatories, prisons, and almshouses. About 6,600 are at large in the community.

The state would gain financially by providing proper custodial care for the 4,500 feeble-minded now cared for in prisons, reformatories, and almshouses. The comparative cost of the various methods of caring for the feeble-minded is more fully discussed on another page (see "Colonizing Social Misfits in New York State").

It has been estimated that a single family of the feeble-minded and epileptic class has cost the state of New York more than it has spent for the building and maintenance of the Custodial Asylum at Newark since it was first established.

Man, not God, fixes the death-rate.—Kansas State Board of Health.

The MODERN HOSPITAL

Editorial Office . . . . . Conway Building, Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd . . . . . Fidelity Building, Baltimore
Frederic A. Washburn . Mass. General Hospital, Boston
Winford H. Smith . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater . . . . Mt. Sinai Hospital, New York
W. L. Babcock . . . . . Grace Hospital, Detroit
John A. Hornsby . . . . . Conway Building, Chicago

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State Hospitals and Agricultural Preparedness

An interesting movement has just been initiated in Maryland in connection with state hospitals. As the greater number of state hospitals are situated in the country and as a rule are surrounded by broad acres of fertile farm land, they possess excellent opportunities for the practical working out of methods increasing the production of food in these days of war. To cultivate these rich farms a supply of labor is to be had in the hospital itself—a supply which is not in danger of being diminished by enlistments or the lure of high wages in other industries. The great majority of patients with chronic mental disease are capable of accomplishing a certain amount of farm work under proper guidance and direction by judicious physicians with benefit to themselves in the form of increased mental vigor and self-respect. In fact, such industries have long been regarded as essential to the cure or betterment of these patients. At many of these state farms, indeed, systematized farm work is regarded as an important curative agency. At a meeting in Baltimore of the trustees of four state hospitals and one state institution for feeble-minded children and adults, the lunacy commission, the agricultural board and the governor of Maryland, it was decided to make a full survey of the resources of the institutions of the whole state in order to utilize the farms to the best advantage to increase the food production of the state.

This will increase food production by coordinating the farms and laborers who might otherwise duplicate efforts which could be more profitably employed in other directions. The state board of agriculture is to examine each farm and present a definite scientific program for its cultivation and management. One institution may be best adapted to the production of grains, another to dairy products, a third to trucking or to vegetables exclusively, and the like. Under the arrangement proposed, the institutions are free to develop their material resources and man power to the utmost with a certainty that these economical factors will contribute the best that is in them to the public welfare. The labor of able-bodied men can be fully utilized in outdoor employment and that of able-bodied women in the sewing room, the garden, the canning house or the dairy.

It is proposed also to organize in connection with each state hospital a company of men for emergency work. These men can be sent by means of motor trucks to assist farmers living within a radius of five or ten miles to help gather vegetables, like potatoes, beans, peas, etc., or crops like wheat, oats and similar grains. Under a competent supervisor they can be transported to their field of labor each morning and returned to the institution every night for medical inspection and care whenever needed. Breakfast and supper could be furnished at the institution and dinner at the farm where the emergency labor is to be performed. Such an arrangement would obviate any possibility of hardship to the patient from a lack of the usual daily medical routine. Inasmuch as these patients would be available in large squads, their varied tasks would be performed expeditiously, and a large number of farms might be served.

It must be borne in mind that labor of this character is not equal in individual cases to the labor of able-bodied farm laborers, but it must also be remembered that in the aggregate it will prove of material advantage because it utilizes a product which heretofore has been regarded a negligible asset. A portion of this man power has been used, it is true, but it has never been coordinated and rendered available as a whole for meeting emergencies. Much good is expected from the experiment. HENRY M. HURD.

War-Time Foresight

The war, with its inexhaustible capacity to consume and to disorganize, is our excuse for once

again recurring to the disagreeable topic of ordering goods in our hospitals.

For nearly three years now an ever-increasing number of people have been leaving the producing side of the human ledger and have been joining the huge host of destroyers. The time has now come when all surplus is about used up, when goods that would have been refused as worthless a while back have done their duty and disappeared. Material and labor in Europe can no longer be counted on, and this country, in declaring itself in the war, must assume burdens never dreamed of before or anticipated in connection with our "bit."

We are thinking just at this moment of hospital supplies, medical and surgical, foods, fresh and preserved—in fact, every commodity that we use. Of course, in regard to many commodities, the hospitals must take their chances with the world at large, and on even terms, but there are some things that we need which are so specially needed as to constitute an exclusive hospital problem and for which special foresight and judgment must be employed.

If we buy too much we shall be accused, and rightly, of hoarding, and of unsettling markets. If we do not buy enough we shall be neglecting our patients. It would seem, then, to be one very safe and sane rule to go on our way calmly, in the knowledge that we are passing through a most serious time, but without growing excited or hysterical.

We should buy what we really need, and by all means we should order what we want far enough ahead to allow the producers to plan and arrange their output to the best possible advantage. If we all do this we shall get better goods, cheaper, and we shall be contributing no small part to the successful issue of the war.

Meeting War Stringency in the Hospital

On other pages of this issue are articles, which we commend to the serious attention of our readers, on economies in food and other hospital supplies. One article is composed of contributions from the Burke Foundation, White Plains, N. Y.; Presbyterian Hospital, Chicago; and the Hospital for Ruptured and Crippled, New York. Another is an article by Miss Catherine C. McGrath, chief surgical supervisor in Grace Hospital, Detroit, on the economical cutting of gauze for surgical dressings, and a third by Mr. Daniel D. Test, superintendent of the Pennsylvania Hospital, is on the reclaiming of used gauze and cotton.

These articles are well worth consideration by hospital people. If the food situation in this country is to be as acute as all the signs now lead us to believe, or even if it is to remain as acute as it is now, the hospitals are facing a hard time, and it behooves their administrators and trustees to utilize every agency and to practice every method that will lower costs. Not only in food supplies does this apply, but also in the use of medical and surgical supplies, dressings, bandages, and the staple pharmaceuticals. Already the labor question is serious, and hospitals are going to find themselves obligated to use convalescent patient labor wherever possible, to practice every possible economy in nursing care, because nurses, too, are going to be continuously scarcer, and to practice administrative economies never before thought of.

The effort is going to be a hard one for our hospitals because during recent years we have been thinking in terms of higher standards and a more efficient care of the sick, in step with the demands of modern medicine, and we have sometimes almost ignored the question of cost, or at least subordinated it to the problems of efficiency and high service. We cannot lower our standards one whit; we must do all that we have been doing for our patients, but we must do it for far less money than we have ever done it before.

Hospital administrators are facing the greatest task that they have ever had, and those who do not rise to the occasion are going to find themselves in great difficulties. Many a superintendent is going to lose his or her position in the next year or two by failure to measure up to the necessities of this trying period that we are about to face.

The article consisting of Dr. Wright's contribution (obviously inspired by Dr. Frederic Brush's masterly administration) and that of Mr. Asa Bacon, superintendent of the Presbyterian Hospital, should be read and re-read, and the menus themselves should be studied. Mr. Test's and Miss McGrath's papers also are worth careful consideration.

Discovered—A New People

When we set out to write this editorial, we were inspired to begin with a rhapsody on the humanitarianism of our time, the benevolence, the kindly spirit that disposes us to seek out the hurt, the sick and unhappy for helpful ministration. And then there came across our mind a thought of the horrors of the war now rumbling so close to our own firesides, and a suspicion that perhaps our vaunted humanitarianism was only pretense and that we are no better today than were the Huns and Goths or the Spaniards of the Inquisition, and no more enlightened than the Cotton Mathers who hunted old women witches.

But on second thought we realize that after all

the world war is a baptism in fire and blood for a high and holy cause, and that out of it shall emerge a better world, a higher humanity, a great flood of unselfishness that shall dwarf even our present-day ideals of liberty, equality, and fraternity.

So we go on with what we had in mind to write about, namely, the discovery of a new class of human beings, a class just like ourselves, with the same capacity to be happy and miserable, but a class that seems to have escaped the beneficent and benevolent eye of humanity up till now. We refer to the indigent aged. There are hospitals and homes, there is a distinct literature, there are conventions and conferences for apparently every other class of people in the world—but for the aged, there is a waiting place for eternity, and an infinitely small niche in the hall of oblivion.

But now it seems there is to be a new day for the aged. They seem to be human, even as you and I, and entitled to at least a casual survey at the hands of trained and sympathetic students.

In this issue, on another page, we have a paper by Dr. I. L. Nascher, of New York, on "The Institutional Care of the Aged." Dr. Nascher knows what he is writing about. He was, indeed, one of those who discovered the aged as a class of society worth thinking about and working for, and what he has to say is worth while.

The main point about Dr. Nasher's paper is that there is a real and a big problem concerned with old people; that this social class isn't all wastage and wreckage; that there is much salvage in the shape of work that old people may do; that under capable stimulus and care they can be made about as happy and productive as the rest of us.

Besides, in ministering to our aged with loving care and affection, we are stimulating one of our best if most neglected virtues, reverence.

Why Not Uniform Training School Records?

Recognized standard curricula for training schools have long been a crying need of the nursing profession. That the professional training given by certain schools is superior to that given by certain others is a commonplace recognized by all the nursing world; but probably few authorities would agree exactly in defining the difference between these leading schools and those below them, or in stating the essentials of the superiority of one class over the other. This is inevitable because, up to the present, no comprehensive system of standards has been worked out and generally accepted.

A similar condition prevails in regard to the records of individual pupil nurses. The head of the training school and the members of the teaching staff may know very well that one pupil is far superior to another—has done more conscientious work—has profited to a much greater degree by the opportunities afforded by the school. Yet, provided the inferior pupil has not fallen so far below standard as to be unable to pass, the records may show little or no difference between the two. The head of the school, if called on for a statement of the ability of a pupil compared with others is compelled to rely very largely on personal impressions and a more or less fallible memory.

The paper by Miss Alice F. Bell on "Records of Schools of Nursing" in the Department of Nursing, this issue, is one of the most important contributions to nursing literature of recent years, in that it offers a well-thought-out system of records to meet just this need. Miss Bell's work was done under the auspices of the Department of Nursing and Health of Teachers College, Columbia University, and has the personal endorsement of Miss Goodrich. This is enough to say with regard to its quality. We are sure that training schools all over the country will welcome this most valuable contribution to the literature, which perhaps is to mark the initiation of a standard system of records that will reach far into the future and that will mean much for better teaching.

Special Features in Prospect

Next month we shall present a number of important articles on eye hospitals and clinics, and also on work for the blind, particularly the vocational training of the blind. Among these papers are an article by Dr. Arnold Knapp on the Herman Knapp Memorial Eye Hospital, New York; an article by Dr. John McMullen, of the U. S. Public Health Service, on the work done by the government to eradicate trachoma in the Appalachian mountain region; and a paper by Dr. Catherine Brannick on social service work in an eye hospital or dispensary. There will also be articles on the education of the blind in Massachusetts, Illinois, Pennsylvania, and elsewhere.

Dr. Louis C. Ager contributes an article on the emergency hospital for the care of infantile paralysis provided for the borough of Brooklyn by Mr. William Randolph Hearst, of the *New York American*.

Other interesting articles for publication in the near future include a series of papers on nurses' homes; an article by Dr. Clarence F. Graham on the equipment and organization of the clinical laboratory of Albany Hospital, and one by Dr. Stuart Graves on the clinical laboratory of Louisville City Hospital. Dr. Hornsby's series on

standardization is to be supplemented by several papers on the intimate details of standardization in special institutions. The first of these articles will be by Mr. Francis Bardwell, inspector of almshouses for the Massachusetts State Board of Charity, on "Standards of Almshouse Administration."

Hospital Treatment for Remediable Disqualifications for Army Service

The United States Government medical examiners for the various war services have had the experience common to every country when it first prepared for war of running across innumerable small, remediable defects for which candidates either must be rejected or must be operated on or treated before they can be accepted.

St. Luke's Hospital of New York seems to be the first institution that has recognized and gone out to meet this problem. Recently a thirty-bed ward was opened as a sort of repair shop for just this kind of patients, and $2,000 a month has been appropriated to pay for the service.

It is to be hoped that hospitals in every part of the country will set aside space and appropriate money to take care of men who are suffering from minor physical defects and thus enable them to serve the country in one of the various services for which they are applying.

NEWS FROM "SOMEWHERE IN FRANCE"

The Splendid News Service of the American Red Cross for the Benefit of the Family and Friends of Members of the American Expeditionary Force

The letters which follow illustrate the splendid service organized by the Red Cross to furnish regular bulletins of trustworthy news concerning the members of the base hospital units now going from this country to serve near the front. Only those who have dear ones in the war zone can begin to realize what this service means in the way of comfort and peace of mind to those at home. The foresight and thoughtfulness displayed in this detail furnish an additional reason for confidence in the methods used by this organization in preparing for the heavy task before us.

FOR THE INFORMATION OF THOSE HAVING FRIENDS OR RELATIVES WITH BASE HOSPITAL NO. 2

It is the intention of this office to issue regular bulletins as often as the news warrants, to keep you in touch with the activities of this unit.

Immediately upon receipt of news of the arrival of this unit abroad, you will be notified.

The mailing address of all members of this unit, until further notice, will be:

U. S. Army Base Hospital No. 2, care Sir Alfred Keogh, War Office, London England.

Prior to sailing, the following donations were made to the unit: a complete set of athletic equipment, including base ball, basket ball, tennis, football, handball, boxing gloves and punching bags, quoits, tether ball, and a variety of indoor games. A large quantity of tobacco was donated to the enlisted men. Nurses, stenographers and members of the staff were presented with special life preserver suits.

Very sincerely yours,

SIDNEY R. BURNAP.

Immediately on the arrival of the unit in England, a telegram was sent to the families of all members of the personnel, giving this information and adding that all were in good health and spirits, and that it was being enthusiastically received in England. Later, when letters had had time to cross the Atlantic, the following letter was sent from the Red Cross office in New York:

FOR THE INFORMATION OF THOSE HAVING FRIENDS OR RELATIVES WITH BASE HOSPITAL NO. 2

The first letters from members of Base Hospital No. 2 have been received in this office and inform us of a very comfortable voyage. During the last part of the journey the steamer was convoyed by one of our own destroyers.

Cable advices have informed us of the safe arrival of the unit in France several days ago.

During the trip the enlisted personnel were thoroughly equipped and moderately drilled. The director of the unit has commented especially upon the splendid morale of this group.

Great enthusiasm greeted the arrival of the base hospital in England, and every possible provision was made by the British Government for the comfort and entertainment of its members.

In answer to repeated inquiries received in this office, would say that members of any hospital unit will be allowed to communicate by mail, or otherwise, with their friends or relatives at home. Obvious delays, due to the censor, must be expected. No change of mailing address has been received up to this time.

Very sincerely yours,

SIDNEY R. BURNAP.

An illustration of the magnificent efficiency of this service afforded by the case of the accident on the Mongolia. It will be remembered that two nurses, Miss Helen Burnett Wood and Mrs. Edith Ayres, were killed, and a third, Miss Emma Matzen, was injured by the ricocheting of a brass cup from an exploded shell. Immediately after the accident, news was sent by wireless to Red Cross headquarters, and Mr. Burnap telegraphed to the families of all the members of the unit the facts of the accident, adding that no other persons than those named were injured, that the vessel was returning to port, and that there was no occasion for anxiety concerning the other members of the unit. Thus the families of these persons had accurate information twenty-four hours before it was in the newspapers, and in a more complete and authentic form.

The Poor House*

BY SARA TEASDALE.

Hope went by and peace went by,
And would not enter in;
Youth went by and health went by,
And love that is their kin.

Those within the house shed tears
On their bitter bread;
Some were old and some were mad,
And some were sick abed.

Gray death saw the wretched house,
And even he passed by—
"They have never lived," he said,
"They can wait to die."

*Contributed as a model poem for competitors in the Minneapolis public schools' "health poetry" contest during that city's community Health and Happiness Week: reproduced here by courtesy of the Survey.

COLONIZATION OF SOCIAL MISFITS IN NEW YORK STATE

Work of the Rome State Custodial Asylum—Five Farm Colonies for Feeble-Minded Boys—Self-Supporting Industrial Colonies

The feeble-minded and socially unfit population of New York State is said to number from 30,000 to 32,000. Six thousand are in institutions for the feeble-minded; about 6,000 more are estimated to be in institutions not designed for the feeble-minded; and about 20,000, or nearly two-thirds of the whole number, are at large in the community.

Dr. Charles Bernstein, superintendent of Rome State Custodial Asylum, believes that the transfer to appropriate custodial institutions of the 6,000 feeble-minded inmates of the state prisons and jails, reformatories, almshouses, and state hospitals not only would relieve these institutions of a most troublesome class of inmates, but would also be a saving to the state of from 20 to 50 percent on the cost of maintenance. At the Rome State Custodial Asylum over 1,500 inmates are humanely cared for at a cost of $2.90 a week. The cost of caring for the same class of inmates in girls' reformatories is $5.47 a week; in boys' reformatories it is $4.66 a week; and in the state hospitals it is $4 a week. It is estimated that it costs $500 an inmate to build large brick buildings of the usual custodial type, in which the inmates are simply housed and cared for, an expense to the state. The same amount of money applied to the purchase of farms will render the inmates self-supporting, for twenty inmates may be provided for on a farm of 100 or 150 acres, costing $10,000.

Fig. 1. A class of feeble-minded boys at Rome State Custodial Asylum and materials for color, form, and sense training.

The central institutions already completed or begun are sufficient, when completed, Dr. Bernstein believes, for the first reception and training of feeble-minded children. Extension of the work should be along the lines of colonization of the industrially trained inmates. Many of the women, under proper supervision, could be very useful in large centers of population, doing domestic work, hand laundry, and sewing of a character not sought by normal labor. The trained feeble-minded boys and men could be made happy and self-sustaining by colonization on state-owned lands or abandoned or undeveloped farms.

The value of these principles is not speculative; it has been demonstrated by experience. The Rome State Custodial Asylum has seven farm colonies, each entirely self-sustaining, including all expenses and 5 percent on the investment, and two colonies for girls in the city of Rome, which are likewise self-sustaining. Both the girls' and the boys' colonies receive trained border-line cases and morons.

On five of the farm colonies, $90,000 worth of farm products were raised last year at a cost of $46,000. This furnished 25 percent of the total cost of maintenance of the asylum population of 1,800 (including employees). A permanent colony of trained boys has been placed on state preserves in the Adirondacks to grow trees and do reforestation. The report of the Conservation Commission shows that the work done in 1915 by a temporary colony was much better done than it had ever been done by paid labor or by convict labor. At the permanent reforestation colony, twenty boys will live the year around on 150 acres of open farm land, being joined during the spring and fall planting seasons by other boys, who will camp in tents. This farm also is more than self-supporting. The boys produce all the vegetables, milk, butter, beef, pork, mutton, eggs, etc., needed for maintenance, and have considerable quantities of excess products to sell, especially wool from the sheep. It may be found of interest to compare these results of the colony plan in New York with results from the same plan in New Jersey, reported elsewhere in this issue.

The inmates of the two girls' colonies in the city of Rome are not markedly defective; they are girls who, in part at least because of defects in home training and lack of normal social experience, have been unsuccessful out in the world on their own responsibility. Having been sent to the asylum for study, care, and training, they are given the teaching and training previously lacking in their lives, and then placed in the working girls' colony. Here they are under the charge of a housekeeper or matron; a social visitor inspects their working places, instructs them in street deportment, accompanies them to moving-picture shows and other social diversions, assists them in purchasing their clothing, etc. Thus the girls are at the same time learning normal social reactions and being tested as to their ability to carry the responsibility for the direction of their own lives. While at the colony, they go out to do domestic work and sewing by the day, week, or month. Payment for their services at the rate of $3.50 a week is made to the manager of the home. Each girl is given 25 cents a week for spending money and 50 cents a week for her individual bank account. The remainder is placed in the general fund, from which each girl is given money for clothing and other necessary or reasonable purposes. The colony as a whole is self-supporting. The girls passing through the girls' colonies will either continue to work under supervision of the colonies

or finally live in the homes where they work under supervision of a social worker, the colony merely serving as their social center, thus one group of girls will be going from the institution in the bus daily to work, returning to sleep at the institution, the colony being their means of exchange. Another group will be living in the rented houses or colonies, and still another group having larger liberties and responsibilities will room and eat where they work, but come to the colony for their social activities, the colony really being their home.

The boys will work on the farm colonies for a few years and when they have proved trustworthy will go out to live with and work for farmers. There already are nearly one hundred boys living with farmers in this way who have graduated from farm colonies and proved trustworthy and

Fig. 2. One of the reforestation camps of Rome State Custodial Asylum.

reliable. These boys and girls, when paroled to live where they work, go out in accordance with the following form of agreement:

Rome, N. Y.. . . . .

I . . . . . hereby agree to take . . to work for me, with the understanding that after he has been with me four weeks I will decide whether or not he proves satisfactory, and I agree to pay him $10 per month for ten months and he is to remain with me the remainder of the year for his board and spending money.

I agree to report at least once in three months on how the boy is getting along and make complete settlement and take receipts for all clothing bought for the boy and keep close track of the spending money I give him, which is not to exceed 25c a week or $1 at any one time if he is going to town, and the balance of money due him at the end of each quarter will be left at the asylum for the boy, the understanding being that it is to be placed in the savings bank to his individual credit.

. . . . . .

I. . . . . hereby agree to the above contract.

. . . . . .

Witness both signatures

. . . . . .

A few of these boys and girls may prove sufficiently trustworthy and reliable to be discharged from the institution, but many others will undoubtedly have to be under supervision of a visiting inspector for a long time.

There is also one city colony for boys who work by the day about Rome caring for furnaces, walks, lawns, gardens, and one boy in a bicycle repair shop and another operating an elevator in a department store.

The very marked improvement in most of these parole cases is said amply to justify this experiment in rehabilitating boys and girls who otherwise might easily become social waste. Before the colony plan was adopted, many boys and girls who went out under individual parole became lonely and homesick, and therefore naturally tended to drift to the streets and to form undesirable acquaintances. The colony bridges over the gap between the asylum and complete independence, guarding and aiding these young people while they are forming new acquaintances and fresh points of contact with the world.

It is said that during the past decade the proportion between the types of the feeble-minded coming to asylum doors has changed greatly. Whereas ten years ago 80 percent were idiots and imbeciles and only 20 percent border-line cases or morons, now the percentages are reversed, only 20 percent being of the idiot or imbecile class and 80 percent morons and border-line cases. Dr. Bernstein believes that this is due to the industrial changes which society is undergoing. As machinery displaces hand labor and industrial society becomes more and more highly organized, specialized ability to an ever-increasing degree is required for success, and less and less low-grade unskilled labor is demanded. It is going to be ever more necessary, therefore, to study these cases of social failure.

"During the past ten years," Dr. Bernstein says, "I have seen many boys and girls thus rehabilitated. The fact that a few fall on the first trial or repeatedly is no sure criterion that our judgment of the case was mistaken, for

Fig. 3. The delights of the wild. One of the tents at a reforestation camp.

I have many times seen these very same cases of failure succeed almost immediately when placed in another new environment and from then on make good. Possibly the previous experience in failure was one of the best lessons such cases could have had. Were not all of us tried by our parents and friends many times, and often at the point of social failure except that an indulgent parent was at hand to try us again and again until we eventually found ourselves?"

A modern hospital train has recently been presented to the state of Maryland by the Baltimore & Ohio, Western Maryland, and Pennsylvania railroads. The train was fitted up under the direction of the Maryland Preparedness and Survey Commission according to plans prepared by Dr. D. Z. Dunott, chief surgeon of the Western Maryland. It consists of three cars for patients, an operating car, a Pullman and dining car for the personnel of the hospital, and an express car, which carries two motor ambulances. An overhead trolley, by means of which a stretcher may be carried from one car to another, is a feature. The equipment is said to be quite up-to-date for a hospital of the kind and very complete. Patriotic women of Maryland have furnished many of the necessary supplies, including bed clothing, bandages, convalescents' clothes, and medicines. The train is stationed near Baltimore, and is in charge of Miss Rhoda Gillelan, a trained nurse.

NEW JERSEY COLONIES FOR THE FEEBLE-MINDED

Menantico Colony and Burlington County Colony Demonstrate Possibilities of Happiness and Usefulness for the Feeble-Minded and of Protection for Society in the Colony Plan

The Committee on Provision for the Feeble-Minded, in a recent publication,[1] shows how the feeble-minded, when colonized under intelligent direction, can be usefully employed and at the same time protected and kept happy and contented. Under good conditions and with a population including a fair percentage of the higher grades (imbeciles and morons), it is maintained, the annual expense of the colony should be less than $100 a year for each inmate. Expensive buildings and elaborate equipment are not necessary. It is estimated that a colony of from 100 to 300 inmates can be comfortably housed in one-story frame or cement buildings and provided with necessary industrial equipment at a total cost of not over $250 per capita. This estimate includes dormitory buildings, central kitchen and dining room, industrial building for those capable of using tools, horse barn, dairy barn and milk house, piggery and poultry houses, tool, machinery and wagon house, vegetable house and root cellar, water supply, sewerage system, administration building, and superintendent's residence. These figures imply the use of inmate labor wherever possible.

Fig. 1. Feeble-minded boys making cement blocks to be used in constructing the buildings for Menantico Colony.

That such results are actually and practically attainable has been shown in Indiana, Massachusetts, Minnesota, New Jersey, and other states. The Committee on Provision for the Feeble-Minded describes two representative colonies, both in New Jersey. That state possessed, just west of the long strip so much frequented by holiday crowds, a strip of naturally fertile land, once inhabited and cultivated, but now largely deserted and relapsing into wilderness. The reclamation of this waste land was recognized as work peculiarly suitable for the feeble-minded.

Menantico Colony was established in 1913 by the directors of the Vineland Training School, in which the inmates of the colony have had preliminary training. The land, comprising 530 acres, cost $10 an acre; the soil is suitable for sweet-potatoes, berries and other fruits, and general truck-farming, while swamp-land along the banks of Menantico River are adapted to cranberry, huckleberry, and willow culture. Three portable buildings were placed on the tract, and several boys transferred thither and placed at work, under the direction of the mason, making concrete blocks for the construction of the remainder of the plant. Twelve boys were able to make about 600 blocks a day with a hand molding machine and a gasoline mixer. Up to November 1, 1916, accommodations for 120 boys had been provided, at a total cost for construction of $27,734.58, or $231.12 per capita. This does not include furniture and equipment. The buildings are light and airy and have hot-water heat, electric lights, and modern toilet fixtures. In addition, up to April, 1916, the boys had cleared about 115 acres, and had raised good crops of vegetables and melons.

All this work is productive not only of material benefit, but also of much happiness to the boys. In the first place, the size of the tract and the conditions of the life permit a considerable degree of freedom; the boys are able to roam the woods, to bathe in the creek, etc. Moreover, the making of their own home appeals to the pride of the boys; they are able to take a proprietary interest in the results of their labors—to speak of "our" colony, "our" field, "my" cow, or horse, or pig. And, still further, the work of cutting down bushes, pulling up stumps, and burning brush-heaps holds a special appeal for immature minds, in which destructive tendencies are strongly developed.

The Burlington County Colony, the other New Jersey experiment, was the outgrowth of studies made by Miss Elizabeth S. Kite under the direction of the state commissioner of charities, Joseph P. Byers. In tracing the family connections of one defective child, Miss Kite found a stock branching out through many counties and containing so many defective members that it seemed utterly out of the question to place all in any form of institution already in existence. Accordingly, the attempt was made to enlist the aid of citizens of Burlington County and of various state departments toward the development, at no cost to the state, of a colony on state land. It was intended that the colonists should, in return, aid the state departments by running fire lines, fighting forest fires, reforesting, and furnishing a place for agricultural experiment work. An 87-acre tract of land was secured from the Forestry Department, and meetings were held in nearly every commu-

Fig. 2. Feeble-minded boys of Menantico Colony hoeing sweet potatoes.

[1] Colony Care for the Feeble-Minded. Bull. No. 4, price 5 cents, issued by the Committee on Provision for the Feeble-Minded, 702 Empire Building, Philadelphia.

nity in the county to raise money to initiate the enterprise. Subscriptions and contributions came in, not from the intelligent and well-to-do alone, but also from the poor who had seen the good done by the Vineland School. The neighbors of a little idiot girl who had been sent to Vineland shortly before brought in a good sum in ten-cent and quarter-dollar pieces "fer de keedie." Fifty cents in pennies was the sum collected from her friends by a poor mother whose boy was at Vineland. Foreign laborers at a seed nursery contributed ten dollars; the same amount came from the girls in a shoe factory, and five was the thank-offering of a little community in the heart of the pines whence a crippled child had gone to Vineland. Work was begun in January, 1914.

Fig. 3. One of the buildings at Burlington County Colony.

The expense of establishing the colony was approximately $15,000. The buildings cost $10,000; the equipment, including live-stock, wagons, farming implements, etc., was $3,000, and the water supply, sewerage, etc., cost $2,000. This provides accommodation for 50 boys, though the equipment is sufficient for a larger number.

This colony has lately been taken over by the state of New Jersey. An initial appropriation of $25,000, made by the State Legislature for the establishment of a new institution, has been devoted to increasing the accommodations of the colony and paying its expenses.

The Committee on Provision for the Feeble-Minded points out that feeble-minded irresponsibles—the "innocents"—are too often being punished in jails and prisons, confined in almshouses and hospitals for the insane, or racked to meet normal requirements in schools or in other social relationships. They are not susceptible of reform; the environment of almshouses and hospitals for the insane is not suitable for them; in schools they are a drag on the progress of normal childhood, and in society generally they constitute an incubus as well as a potential menace. To be safe, happy, and useful they need a task under intelligent direction, and in an environment which makes no demands on them that they are not able to meet. "Once having learned how, a feeble-minded person is delighted to do a thing over and over, if some normal person will pat him on the back, encourage him and give him a smile." The welfare and happiness of these feeble-minded dependents, and the safety and good of society are to be gained by the same means. On every account, therefore, society cannot afford to continue its old, thoughtless, wasteful, and cruel neglect.

Improvements which will require an expenditure of $3,000,000 during the next five years are being planned for the North Carolina state institutions.

THE NATIONAL CRISIS AND THE COLLEGE-TRAINED WOMAN

Need for Increase in Our Forces of Trained Nurses—An Appeal to the Patriotism of College Women From the National Emergency Committee on Nursing—Training Offered Under Specially Advantageous Conditions

The following letter, sent recently to the presidents and deans of colleges for women and to coeducational colleges, is but the beginning of a campaign which it is hoped will result in the enlistment in schools of nursing of college and high-school graduates throughout the country:

The national crisis brings an urgent call for the college-trained woman, which we ask your help in meeting. The war has now drawn to service in France hundreds of our most highly trained and skilled professional nurses, and in our hospitals and in the homes of the sick poor the loss of such workers is already felt. But so appealing is the call from France that we cannot fail to answer it, nor can we fail to answer the call for the many more hundreds of nurses which the next few months is almost certain to bring us.

The withdrawal of many skilled workers from a field which is never adequately supplied inevitably brings about a critical situation, and the effect upon our hospitals and training schools will be particularly disastrous in that those called away are now including and will continue to include very many of the superintendents and teachers who are needed to direct the teaching and training of future nurses. Not less disastrous will be the shortage in the public health field. By far the most important function of the visiting nurse is health education of the people. Never was there greater need for the conservation of child life. Never was there greater need for the fullest enlightenment of all classes of society concerning hygiene and sanitation. Reports are coming to us of an appalling increase on the other side of those diseases which cause the greatest ravages in the social structure and we are not likely to escape these results of the war on this side. We shall need to increase greatly our forces of trained nurses in order to meet the grave consequences of throwing back into a country unable now to cope with its problems of poverty and sickness, these additional burdens of helplessness and disease. And we need to begin to train these larger forces for the certain task that is before us.

No contribution to the solution of this problem can be made by the short popular courses in nursing now so widely offered and urged. To meet it intelligently and effectively we must be able to call upon workers trained to understand and deal with disease, and such training can only be secured in the hospital laboratory and under expert direction. Schools of nursing should be able to train most rapidly those whose previous education has included a good scientific groundwork and some study of social subjects, and it is believed that such preparation as is obtained in our colleges justifies a shortening of the usual three-year period of training in the regular schools of nursing.

Because of the extraordinary condition a number of representative schools of nursing have, in response to our request, agreed to admit college graduates under specially advantageous conditions. Credit for a full academic year will be given to such candidates who bring satisfactory scientific and other preparation to meet the usual requirements of these schools of nursing. For women so prepared the course of training will be brought into a period of two years, exclusive of the brief term of preparatory work. It should be borne in mind that students in schools of nursing have usually no expense to meet for tuition, and in all schools board and lodging, laundry, and in some cases uniforms, are freely provided.

The desire of our college women to render real service in this great crisis is taken for granted. We wish here to urge, with all the emphasis at our command, the double importance of the opportunity for service now offered them. As students of nursing in our great hospitals they are from the day of entrance helping to take care of the sick as an essential part of their training, and are at the same time steadily at work qualifying themselves to enter a professional field which will assuredly afford them abundant opportunities to utilize the highest powers they may possess.

Because of the gravity of the situation with which we are confronted we feel it to be urgently necessary to take such steps as will look well to the future, and will enable us to meet its needs, in so far

as they now appear to be foreshadowed. A national emergency committee on nursing is being created, which will probably exist throughout the duration of the war, and is now preparing to supply later fuller and more specific information to your students, and to give such further advice as may be needed. In order, however, that this matter may be presented to your graduating students before they disperse, we are sending you this informal letter, begging you to find some suitable way of bringing it before the students and giving it the weight of your sanction and approval.

Faithfully yours,

LILLIAN D. WALD,
JULIA LATHROP,
ADELAIDE NUTTING,
ANNIE W. GOODRICH.

As is stated in the letter, a number of representative hospitals have signified their willingness to give some credit for college work. These institutions are as follows:

New York City: The Presbyterian Hospital, St. Luke's Hospital, Mount Sinai Hospital, Bellevue and Allied Hospitals, Post Graduate Hospital.

Cleveland, Ohio: Lakeside Hospital.

Providence, R. I.: Rhode Island Hospital.

Hartford, Conn.: Hartford Hospital.

Philadelphia: The Presbyterian Hospital.

Newton, Mass.: The Newton Hospital.

St. Louis: Barnes Hospital of Washington University.

Minneapolis, Minn.: The University of Minnesota.

Cincinnati: The University of Cincinnati.

Indianapolis: The Robert Long Hospital, The University of Indiana.

Augusta, Ga.: The University Hospital.

Boston, Mass.: The Massachusetts General Hospital is willing to arrange that the final year be spent with any organized district nursing association; the Peter Bent Brigham Hospital has taken in an extra class and will, if necessary, graduate its present students earlier.

Baltimore: The Johns Hopkins Hospital is governed by the Maryland law requiring three full years of training in the hospital.

Illinois: The same is true of all hospitals in the state of Illinois.

It is hoped that many more schools will be ready and able to make this arrangement.

A National Emergency Committee has now been created, with Miss M. Adelaide Nutting as chairman and Miss Ella Phillips Crandall as executive secretary, which includes in its membership Miss Lillian D. Wald, Miss Julia Lathrop, Miss Jane Delano, Dr. William H. Welch, Dr. Herman Biggs, Dr. Winford H. Smith, Dr. S. S. Goldwater, Dr. C. E. A. Winslow, and the presidents of the three nursing organizations. In addition to its appeal to young women to enter schools of nursing, this committee will stand ready to assist in making the readjustments that the emergency situation will inevitably call for.

This committee is already cooperating with the committee on nursing of the Mayor's Committee of Women on National Defense, New York City. This latter committee includes in its membership Mrs. William Church Osborn, Mrs. William K. Draper, Miss Lillian D. Wald, and other New York women who are prominent in the social field, together with representatives of the local nursing organizations. This committee has conceived that its most important service will be rendered through a survey of the nursing resources of the city which is now under way. It is hoped that this survey will make possible the establishment of a bureau through which effective readjustments of trained and volunteer nursing service can be made, and that the result will lead to the adoption of a similar survey of the nursing resources in other cities. This committee also feels that the gaining of additional recruits to fill the gaps in the nursing ranks is one of its functions.

The Maternity Hospital Society, an organization formed in Brooklyn about three years ago for the purpose of establishing a maternity hospital, has recently filed plans for a four-story building to cost $50,000. The building will be erected at Howard and Dumont avenues.

HOSPITAL CARS FOR THE CANADIAN GOVERNMENT

Comforts Provided in Cars for Invalided Members of Canadian Expeditionary Forces

BY ESTELLINE BENNETT, Chicago

Hospital cars for invalided members of Canadian expeditionary forces have just been put into operation in Canada by the Canadian Pacific Railway. They are constructed according to plans submitted by the railroad company to the director-general of supplies and transports two years ago when the government considered that the time was not yet ripe for them, with certain innovations added to the original plan during the two years which have been found valuable by the French and British railways in transporting men from the front, and they have gone into commission provided with every possible comfort and facility for medical care.

Six cars have been built, approved by the Military Hospitals Commission, and put into immediate use, under the direction of the Hospitals Commission.

Before being put into commission, these cars were inspected and approved by Col. Dr. Alfred Thompson, chief medical officer of the Military Hospitals Commission; Col.

Interior of Canadian hospital car.

J. J. Sharples, officer commanding the Military Hospitals Command; Col. Emmott E. Clark, assistant director-general of supplies and transport; Captain Symonds, architect of the Military Hospitals Commission; and S. A. Armstrong, director of the Military Hospitals Commission, who, having gone down to Montreal from Ottawa for the purpose of making the inspection, expressed themselves as entirely satisfied with the cars and made no suggestions for any alterations.

There are three units of two cars each, a composite car and a ward car. The composite car contains six cots and quarters for medical officers and nurses. Everything has been provided for the comfort and well-being, not only of the invalids, but also of those in charge of the patients. The accommodation for the nurses is equivalent to that of a drawing room on a standard sleeper, with a toilet room annex upholstered in leather and all possible train comforts. Facilities have been provided for the storage of baggage, and there also is a kitchen attached, such as is included in a tourist sleeper, to make it possible to pre-

pare special foods for the wounded soldiers when necessary.

The medical officers' quarters are fitted up in the form of a compartment with upper and lower berths and a small but complete dispensary.

The ward car consists of one large room, the length of a standard sleeper, with lavatories at each end. Standard hospital cots are installed in both cars; the floors are covered with linoleum and the aisles carpeted.

A special feature of the composite car is the "bad weather entrance." In addition to the usual entrance at each end, there are two side entrances, where patients will be received, and these are fitted with very heavy curtains which can be drawn closely in bad weather, thus affording ample protection from draughts to the patients already in the car.

The hospital cars easily are distinguished on any track by the large red cross painted on a white circle background on either side of the words, "Military Hospital."

INDUSTRIAL TRAINING FOR EPILEPTICS

Experience of Monson State Hospital—Employment Similar to Patient's Accustomed Vocation Most Successful—Rehabilitation of Deteriorated Patients Impossible

BY EVERETT FLOOD, M. D., Superintendent Monson State Hospital, Palmer, Mass.

In our experience, the most successful industrial training falls within three classes:

The first consists, in the case of those previously employed, in furnishing the patient with work similar to that in which he was engaged before commitment. Those afflicted with the disease to an extent which renders them incapable of sustaining their normal position in the community from which they come or of following their customary occupation, or those sent to the institution for antisocial conduct—all these patients deteriorate rapidly if not furnished with employment similar or equivalent to the occupations to which they are accustomed. These patients must have diversional as well as industrial employment, and amusement in addition. Among the amusements provided for patients at Monson during the past year have been baseball games, dances, excursions to Boston and to the lake, picnics, parties, moving picture shows, etc.

In the second place, those who have had no previous employment at home, having been waited upon and considered invalids on account of their disease, can in many cases be developed and their condition improved by teaching them, according to their sex, farm work, house work, laundry work, kitchen work, printing, mattress making, rug or loom work, basketry or other fancy work, both as diversion and as occupations.

In the third place, children who on account of their years have had no school training or who on account of their seizures coming on during school life have been prevented continuing attendance at public schools require diversional and industrial training. These children we have trained in manual work especially, and with the sloyd method by preference. I might mention that a bungalow and barn at Monson State Hospital have been finished by the labor of the boys, and we are now able to take care of our young stock in two barns which have been made out of two very poor barns through the labor of this group of patients. The completed bungalow, which has been made to a very large degree out of waste material, used slate, lumber, etc., from abandoned sheds, is a very satisfactory building and furnishes a home for the attendant and his wife. Such a building constructed from new material would cost not less than $1,800. The boys, however, have spent nearly five years in the work on the bungalow.

Of secondary importance to the manual training is instruction in the ordinary subjects of elementary education—reading, writing and arithmetic, music and drawing, and, for those capable of further development in this line, instruction in the higher branches of school knowledge. In teaching the children it is evident that there are certain types capable of manual training only, their disease affecting their memory so that it is impossible to go on with their academic teaching beyond a certain degree. Patients of another type are capable of still further development, of course. The lower grade of idiot and imbecile type is incapable of any development.

The regeneration of those demented and deteriorated is, in our experience, impossible and a wasted expenditure of energy.

We conclude that rehabilitating or making self-sustaining epileptic patients is a rare occurrence. When such cases occur, it is due to a remission of the disease, or to an infrequent occurrence of seizures combined with nonprogress of deterioration, rather than a result of training. Practically all such patients leaving the institution require supervision to a more or less extent, or else they constitute a danger to the community.

Industrial training, in our experience, is of value in so far as it assists in the economic maintenance of the institution, prevents deterioration in those patients who are prevented from pursuing their vocations in the public community, prepares children to become of economic value to the hospital as they grow older, and makes partially self-sustaining, at least, those who would otherwise have been wholly a burden.

We find that there are still certain children who have been capable of receiving industrial training and educational training, who have a remission of the disease, and who are apparently normal. The problem is, while these patients may be capable of self-support in society, how can we segregate or supervise them to prevent their hereditary defects being transmitted to the offspring?

Bethany Hospital Baby Camp

Bethany Methodist Hospital, Kansas City, Kan., opened on June 1 on the hospital grounds a free baby camp for the treatment and care of sick, diseased, poorly nourished, hungry, and deformed babies under two years of age, irrespective of creed, color, nationality, or location. Free daily clinics will be held each day. There will also be lectures for the parents and all interested persons on conservation of life and health by the best physicians, surgeons, and scientific women. The camp will be held during June, July, and August. It is the hope of Bethany Hospital to reduce in this way the appalling mortality and suffering of the babies of Kansas City and vicinity.

Miss Katherine Major, of Seattle, was reelected president of the Washington State Nurses' Association at a meeting of the association held at Walla Walla the latter part of May. Other officers for the ensuing year are Miss Margaret Newcombe, Walla Walla, vice-president; Miss Isabella Frazer, Seattle, Secretary; Miss Beatrice Short, Spokane, assistant secretary; and Mrs. Etta B. Cummings, Tacoma, treasurer. Tacoma was selected as the next place of meeting.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH,
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

Records of Schools of Nursing*

BY ALICE F. BELL, B. S., R. N., Teachers College, Columbia University, New York, Inspector of Schools of Nursing, Maryland.

In the progressive educational movement of the present day, nursing education has had its share. Much has been gained through a growing recognition of the importance of including in the professional preparation a considerable body of scientific knowledge, correlating with the practical experience. But many factors have intervened to unduly retard progress. Still unsolved is the problem of that method best adapted to combine, in suitable proportion, the old apprenticeship system and the theoretical teaching now held to be essential.

A brief survey of the situation serves to show one feature of training-school work which, to a certain degree, makes the question difficult. Many schools, endeavoring to fulfill ideal standards, have elaborated their curricula so as to include practically all essentials. In not a few instances a course of study is furnished that is well qualified to meet present-day demands. But a definite analysis of the relative values of such efforts is made difficult, if not impossible, by the frequent absence of authoritative records of training-school work.

In the larger schools such additions to the record system as seemed necessary have been made from time to time. Naturally, with a fairly adequate office staff, little attention has been paid to the amount of routine work involved. This has led in some instances to considerable duplication of detail, and a more or less elaborate system apparently beyond the possibilities of the smaller school. Besides, each school having worked out its own system practically independently of others, much lack of uniformity is to be noted. This tends to still further complicate a comparison of results.

The smaller school, looking to the larger institution for suggestions along such lines, is dismayed by the array of material presented. With the office staff probably limited to the already overworked superintendent of nurses, any system offering appears to demand more time than can be spared from other more immediately urgent duties. In consequence the small school records, as a rule, give the most meager information regarding the work of its students.

Yet the very size of such institutions precludes the possibility of a definitely planned and systematically executed training. In many such the primary necessity of caring for the patients with a small nursing force entails much interruption of the students' class work, and also much irregularity in practical experience. No accurate records being attempted, the end of the course of training shows no definite information available as to either the theoretical or the practical work of the pupil. Certain classes and lectures have been held, but how many are actually attended by each individual pupil? Hospital records show certain cases in the various services having been under treatment during the pupil's period of training, but how many has she had an opportunity to observe?

The necessity of affiliation with other schools in order to supplement the pupil's training may be recognized, but only as a vague general principle. No records being available, there exists no definite basis for an accurate estimation of the needs of the students.

With evidence of an increasing number of nurses seeking postgraduate work in colleges and universities, there grows apace the necessity for accurate evaluation of the training school work. But such evaluation presupposes specific data regarding the number of hours actually spent in class work, whether laboratory work, as our ward experience might be termed, or theory in basic sciences or nursing methods. On such detail is based the total credit which the student is conceded on entering any educational institution upholding the usual standards. Surely any nurse, having spent two or three years in a hospital advertising, as in the majority of cases, a thorough course of training in the practice of nursing, should be enabled to procure at any time, from the accredited records of the training school, an explicit statement of the details of this training. Moreover, can any institution which lacks an accurate system of records show proof of having carried out its agreement with the student who enters for this "thorough course of training"?

In the following suggestions we wish to present a comprehensive plan of records, embodying, in a more or less modified form, the most desirable features found in material gathered from many sources. Through the courtesy of the leading schools throughout the country the department of Nursing and Health at Teachers College has been kept informed, from time to time, of developments along such lines of training-school work. This department is indebted to the following schools for many noteworthy points in the accompanying outline:

Peter Bent Brigham and Massachusetts General, Boston; Toronto General, Toronto; Illinois Training School, Chicago; University of Minnesota Training School, Minneapolis; Johns Hopkins, Baltimore; Mount Sinai, St. Luke's, Bellevue, Presbyterian, New York Post-Graduate Hospital, and New York Hospital, New York.

In general, any system of records should be comprehensive, yet essentially brief, avoiding as far as possible any duplication of detail. At the present time, when practically all business houses and other institutions have adopted the card system, it would seem hardly necessary to recommend it to the training schools; yet there are still to be found many schools clinging conservatively to the cumbersome book system. Long since have those schools making use of the card system realized its great superiority in efficiency and practical working value. It is to be hoped it soon will be universally accepted in schools of nursing.

It may be noted, however, in several systems examined, that various cards included show items which are repeated

*The Editor has reason to believe that the utility and convenience of these nursing school record forms will be at once appreciated by hospital and training school officials. Obviously the cost of printing such forms separately for each hospital that may desire to use them would be prohibitive, as special plates would have to be made at considerable expense in each instance. If, therefore, there is sufficient interest manifested immediately by the readers of this journal in these forms, the publishers of THE MODERN HOSPITAL will furnish them in any quantity desired at a cost much less than that at which they could otherwise be obtained. The name of any hospital training school may be ordered printed in the forms where necessary.

in other permanent record forms. For example, the personal interview card gives such details as age, height, weight, nationality, etc., which also appear in the formal application blank, the student's history card, and the index file. One set of records showed such comparatively unimportant items occurring six times. Such errors as these serve to defeat to a marked degree the fundamental purpose of the card system. Why put on any card any information which is to be found elsewhere in the permanent records?

It is perhaps also interesting to observe that in all the records examined none have presented a picture of the actual clinical material by which the pupil has benefited during her training. We would like to call attention to the suggestion offered later as to a method of arriving at a satisfactory record of this most important phase of training. As every plant must be thoroughly tried out in practice before its real usefulness can be confidently asserted, several schools, at the present time, are making a test of this tentative scheme. Later, it is hoped, it will be possible to say that it proves generally acceptable.

LETTER OF INQUIRY, OR PERSONAL INTERVIEW

The first point of contact between the pupil and training school is the personal interview, or letter of inquiry, from the would-be student. Concerning the former, if the applicant appears to be desirable, it is well to make some notes, taking into consideration the personal equation. As a rule, to be of real value, these remarks are so intimate and personal in character as hardly to be included in a file intended for general use. Being closely related to the information given in the letter of inquiry, and in some instances substituted for the latter, the two may be filed together in a section in the vertical file reserved for such material. Though the personal interview card figures frequently in the records, it would seem somewhat superfluous, as practically all details entered on this card appear later in the formal application. If the applicant fails to follow up her first inquiry, such items are of no value. If the formal application be received, the information is available there without unnecessary duplication.

APPLICATION BLANK

As seen in Form 1, this shows considerable abbreviation of the usual form. Certificates A, B, C, and D (Forms 2, 3, 4, 5), relating, respectively, to the educational and physical qualifications of the applicant, are substituted for several items usually included in the application blank. Inasmuch as the ultimate goal we would wish to achieve for all schools of nursing is university recognition, it has been deemed necessary to elaborate somewhat the details of the applicant's preliminary education. Several schools throughout the country have already secured university affiliation, and the most likely basis for an extension of this to others lies in being able to make an accurate statement as to the qualifications of the student body for such recognition.

Certificates A and B (Forms 2, 3), slightly modified to meet our particular situation, are modeled closely after the prescribed forms of other educational institutions. Certificate C (Form 4), relating solely to the condition of the teeth, is felt to be justifiable inasmuch as, today, so much emphasis is laid on oral hygiene. Usually information on this point is covered in the list of questions to which the family physician is asked to make reply (Certificate D, Form 5). This latter form has been rather widely adopted. But with regard to the dental certificate, how many family physicians are in a position to make an authoritative statement? Does the applicant, if in doubt, consult her physician or her dentist? Why not, if the item be of importance, have first-hand information?

LETTER OF REFERENCE (FORM 6)

It may be noted that the application blank calls for two names to be given as references. Such references are not, as a rule, required in an educational institution. But the peculiar problem of the hospital, with its responsibility to the community for those in its charge, makes of supreme importance the character of those carrying on its work; therefore it becomes important that references be required. Moreover, it has been found in the experience of many superintendents that, to be able to produce, at a critical moment, a comparatively reliable testimonial as to character of a certain student, proves an invaluable moral support. A list of questions, such as outlined, has proved to yield more satisfactory information than if the subjects be left entirely to the initiative of the correspondent.

FILING OF RECORDS

On receipt of the formal application, fulfilling satisfactorily all requirements, it may be filed, together with the letter of inquiry and note of personal interview, in an envelope marked with the student's name. Many variations as to the size of these folders are to be found in use, in all ranging from 4 by 8 inches to 9 by 11 inches, the latter being the standard letter size of the vertical file. An effort has been made, in compiling these accompanying forms, to secure as far as possible a uniform size of sheet—8 by 11 inches. This makes possible the use of the standard folder as provided in any vertical filing system, thereby reducing the labor and expense involved in procuring them.

INDEX FILE

At the same time a card (Form 7) is entered in the index file. These cards are to be had in three standard sizes—3 by 5 inches, 4 by 6 inches, or 5 by 8 inches. The form presented eliminates many items often entered, but none have been omitted which are not recorded elsewhere. Until the accepted applicant enters the school, this card may be temporarily filed in a separate section labeled "Waiting List." On her admission it is transferred to the section, "Pupils." Many schools have somewhat complicated their system by introducing a special card for the waiting list, which merely duplicates items entered elsewhere. It is believed that the arrangement suggested above will render this special card also superfluous.

The reverse side of the pupil card (Form 8) is planned as a record of the same student as a graduate nurse. At the end of the training the card may be reversed and placed in a section of the file designated "Graduates." Thus at any time complete information as to any nurse is available. This graduate section may be subdivided by colored guides, to show nurses on duty in the hospital as head nurses, etc., those engaged in private nursing, or various other fields. Additional sections may be arranged for "Affiliating Pupils" (Form 9) and postgraduate (Form 10), if such are admitted to the school; also one for "Pupils Resigned or Dismissed" before completing their training. If the total number of nurses to be accounted for be small, one filing section, with colored guides, may suffice. If it be a large group, different sections will be necessary, and the section corresponding in the vertical file designated, as is customary, by letter or number in the index file.

RECORDS OF THEORETICAL WORK

The Committee on Records and Reports of the National Education Association closes its report with the following

significant words: "Carefully collected and well-organized statistics are vital to the judicious administration of the school." It would appear, therefore, as before mentioned, that to a certain degree we have been struggling in the dark. Does it not seem at times as though we had accepted discrepancies between the prospective and the actual course of study as an inevitable accompaniment of our work? Not until we arrive at an accurate appraisal of such irregularities in training school practice can we hope to reach a thorough appreciation of their important bearing on the results achieved.

It is suggested that this difficulty may be met in part by the adoption of a class-book similar to that in use in college work (Form 11). This book is so arranged that the names of pupils in a class need be entered but once, yet the attendance and standing of the pupil for the whole term, instead of being compiled from different parts of the book, is presented to the eye at one glance. This book is very inexpensive and easily obtainable, and will save much laborious work for the instructor. At the end of the term the record of theoretical work can in a short time be transferred to the summary card (Form 20), which will be discussed later.

A study of the methods of record-keeping in other educational institutions will show great stress laid on an accurate record, as in Form 11, of the actual time spent in any given course of study, not only by the class as a whole, but by each individual student. Statements in regard to this point are, therefore, forthcoming in the case of any student other than a graduate of the present-day school of nursing. Through no fault of her own, when seeking to enter a university, the three years' work of the graduate nurse receives only an approximate evaluation—at that, probably a minimum estimate.

NURSING PRACTICE CARD

It is conceived that the preliminary course of study in the junior year has been more or less generally adopted. During this time the actual ward duty, if included at all, is usually very limited. The nursing practice card (Form 12) is arranged to cover the practical work taken up in this course, and also to extend over, at least, throughout the junior year. This is necessary inasmuch as some schools think it unwise, for many reasons, to teach the more advanced nursing procedures during the probationary period. This card is used to check up the class-room instruction, the pupil's demonstration before the instructor, and two or three observations by the head nurse in the ward of the pupil's ability to carry out each procedure. When reporting for duty in the ward, the pupil presents this card to the nurse in charge, who thus knows how far the pupil has progressed in the class room, and what may reasonably be required of her. The responsibility of the head nurse should not end, however, with merely recording the efforts of the pupil. If such be unsatisfactory, she should, working hand in hand with the instructor, endeavor to perfect the pupil's work. As this card is given fairly constant use, it is more serviceable if printed on rather heavy cardboard.

STAFF PHYSICIAN'S CERTIFICATE (FORM 13)

It has become the custom in many hospitals at the end of the probation period to have a physical examination of the pupil made by the staff physician having the nurses in charge. As a confirmation or refutation of the family physician's report, as a check on the effect the training may have on the physical condition of the pupil, and as a ready reference in the event of her illness, this has been found to be highly satisfactory, and is to be recommended for general adoption. In the form suggested (Form 13), which is to be filed with the application blank, etc., are mentioned the most salient points.

DAILY TIME-BOOK

Any school wishing to establish a record system will find it advisable to begin with a daily time-book, a sample of which is to be seen in Form 14. The names of all nurses in the school, including graduates, pupils, and probationers, are entered each month. The number or initial letter of the ward or department where the nurse is located on the first day of the month, and any changes made during the month, are recorded under the appropriate date. A single check suffices to indicate the nurse's continued service in that department. Night duty may be clearly distinguished by entering in red ink. At the end of each month the day book totals will be posted on the various monthly record cards.

MONTHLY RECORD

The chief advantage of Form 15 is, that the full three years' practical work is presented at one view. This is contrary to what prevails in a number of our best schools, in which the form adopted fails to give this complete picture of the nurses' training. Furthermore, the special function of this record is most frequently lost sight of. It is intended, primarily, for constant use in the assignment of the pupil for a definite period of training in each department of the hospital. For this reason only the pupil's ward experience should be entered on this card. These cards should be filed, not in each pupil's envelope, but, in classes, in a common file—a reserved section of the vertical file—to be referred to whenever a change of pupils is to be made. Large classes will necessarily be handled best in sections. It has been found quite practical by superintendents in large schools to work out very quickly the reassignment of each group by spreading out their cards, thus getting a complete picture of the practical experience of the whole group for the entire time.

Such usage of the cards may destroy their freshness, but, as the information they contain is summarized elsewhere, it is not perhaps essential that these particular cards be retained in the permanent file. By no other method than that described above can the primary function of the card be assured—that is, to call the superintendent's attention, from month to month during the progress of the pupil's training, to the actual practice experience she is receiving, thus endeavoring to avoid any omission or undue extension of time in any service.

EFFICIENCY REPORT (FORM 16)

Several methods are found to obtain as regards the report by the head nurse of the pupil's general efficiency. The majority of these have left to the head nurse the selection of the terms in which to describe the characteristics noted. Such a method demands considerable time and thought, which frequently the nurse in charge feels can be ill spared from other duties.

Form 16 is adapted, in part, from the score card on field work as used in the Wisconsin Library School. This appears to cover all the points included in the forms in use at the present time in training schools. Its great value lies not only in the specific points suggested, accompanied by gradations of qualifying terms, but also in reducing to a minimum the amount of time and thought required to merely underscore the terms applying.

The score card mentioned above is officially announced

School of Nursing of Hospital

APPLICATION BLANK.

(*This paper to be filled out in the applicant's own handwriting and* _____ _____

Superintendent of Nurses _____ _____ *Hospital* _____)
(Address.)

Full name of applicant _____

Home address _____

Birthplace _____

Date of birth _____ month _____ year _____

Name of nearest relative _____
(To be notified in case of illness, etc.)

Address of nearest relative _____

Are you strong and healthy? _____

Have you any physical defects? _____

At what age did you leave school? _____

What educational advantages have you had? _____

State below:

	NAME	LOCATION	Date of entrance	Date of leaving
Elementary school				
High School				
Normal School or Academy				
College or University				

Occupation since leaving school

_____

Have you ever been a pupil in any School of Nursing? _____

Name of such school _____

Date of entrance _____ Date of leaving _____

Names and addresses of two persons, not of your own kindred, for reference. _____

_____

_____

_____

_____

(*With this formal application kindly send a personal letter and inclosed certificates A, B, C, and D, filled out as indicated. In the personal letter give a brief sketch of your life and educational advantages other than already mentioned.*)

I certify the above statement is correct and filled out in my own handwriting. _____

Signed _____

Date _____ 19___. Present address _____

(Size, 8x11 inches.)

School of Nursing of Hospital

A. CERTIFICATE OF HIGH SCHOOL STUDY.

(To be filled out and signed by the principal or some other authorized officer of the High School.)

This is to certify that the applicant, M_____

(1) Was a student in _____ (Name of secondary school) at _____ (Location)

For a period of _____ years, beginning _____ 19__, and ending _____ 19__

(2) Was duly graduated in _____ 19__.

(3) Or completed satisfactorily the subjects indicated below.

(4) Left the institution in good standing.

(5) Is hereby recommended for admission to the School of Nursing of Hospital.

	SUBJECTS	Weeks a year	Periods a week	Minutes a period	Standing, percent
First year					
completed or not completed					
Date					
Second year					
completed or not completed					
Date					
Third year					
completed or not completed					
Date					
Fourth year					
completed or not completed					
Date					

Signed _____

Date _____ 19__.

Official title _____

(Size, 8x11 inches.)

School of Nursing of **Hospital**

B. CERTIFICATE OF COLLEGIATE OR PROFESSIONAL STUDY.

(To be filled out and signed by some authorized officer of the College or Normal School.)

(Additional Blanks may be secured if more than one institution is attended.)

This is to certify that the applicant, M_____

(1) Was a student in _____ (Name of institution.) at _____ (Location.)

For a period of _____ years, beginning _____ 19__, and ending _____ 19__.

(2) Completed satisfactorily the subjects indicated below.

(3) Was duly graduated therefrom with the _____ degree / diploma in the year 19__.

(4) Left the institution in good standing.

(5) Is hereby recommended for admission to the School of Nursing of _____ Hospital.

SUBJECT	No. of weeks studied	No. of periods per week		SUBJECT	No. of weeks studied	No. of periods per week	
		Lect.	Lab.			Lect.	Lab.

Average length of lecture or recitation period is _____ minutes. Average length of laboratory period is _____ minutes.

State (1) total number of "hours," "points," or "units" of credit earned by applicant during his entire course at the above-named institution _____

(2) Number of "hours," "points," or "credits" constituting a year's work normally _____

(3) Number of "hours," "points," or "credits" required for graduation at above-named institution _____

Signed _____

Date _____ 19__. Official title _____

(Size, 8x11 inches.)

School of Nursing at **Hospital**

D. STATEMENT OF FAMILY PHYSICIAN

Name of applicant _____

Exact date of birth _____ Height _____ Weight

What serious illnesses has the candidate had? _____

What infectious diseases? _____

Is she subject to headache? _____

Is she subject to throat disorders? _____

Is she subject to digestive disorders? _____

Is she subject to ovarian or uterine disorders? _____

What is her heredity, especially in relation to tuberculosis, epilepsy, or mental disease? _____

Is her menstrual function regular and normal? _____

Is breath odorless or otherwise? _____ Skin? _____ Any tendency to eczema?

Are her sight and hearing good? _____

Has she been successfully vaccinated within the last year? _____

Has she any physical defect which might interfere with the work of nursing? _____

Have you carefully examined the applicant? _____ Do you recommend her admission to the school? _____

Signature _____ M. D.

Residence _____

Date _____ 19__

(Size, 8x11 inches.)

Form 6

School of Nursing of Hospital

City , State

Miss has applied for admission to this school of nursing, and has given your name as reference. The work of nursing demands young women of absolute trustworthiness and of more than average intelligence and education.

It is also essential that pupils be of good character and in sound health of body and mind. Kindly answer the questions on the third page, and also furnish such information concerning her ability as you may have at your command.

Yours truly,

Superintendent of School of Nursing.

(First page, 5½x8 inches. See third page.)

(To be folded here.)

1. How long have you known the applicant?

2. What has been your opportunity for personal acquaintance?

3. What can you say of her moral character?

4. Has she good habits and disposition?

5. Has she a good fundamental education, and does she show evidence of good intelligence?

6. Has she any characteristics which would appear to disqualify her for this work?

7. General remarks

Signed

Address

(Third page, 5½x8 inches.)

Form 3.

Pupil _____ School of Nursing. File No. _____

Name _____ Class _____

Address _____

Date of admission _____

Date of acceptance _____

Date of resignation _____

Date of dismissal _____

Date of graduation _____

Remarks _____

(Size, 4x6 inches.)

Graduate _____ School of Nursing, Class 191__. File No. _____

Name _____ Registration _____, 191__.

Post-Graduate	From	To	Professional Experience	From	To	Location

(Size, 4x6 inches. Reverse side of Form 7.)

Form 4.

School of Nursing of _____ Hospital

C. STATEMENT OF FAMILY DENTIST

This is to certify that the applicant, M_____

on _____ 191__, came to me for an examination of her teeth, which I found to be in _____ condition.

I have since then given treatment necessary.

Signed _____ D. D. S.

Address _____

Date _____ 19__.

(Size, 5½x8 inches.)

Form 9.

Affiliating Pupil _____ School of Nursing. File No. _____

Name _____

School _____

Admitted _____ 19 ____ Course completed _____ 19 ____

Experience in services	From	To	Theory	Number of hours			
				Total	Lect.	Rec.	Lab.

(Size, 4x6 inches.)

Form 10.

Post-graduate Pupil _____ School of Nursing. File No. _____

Name _____ School _____

Address _____

Admitted _____ 19 ____ Course completed _____ 19 ____

Accepted _____ 19 ____ Dismissed _____ 19 ____

Experience in services	From	To	Professional experience	From	To	Location

(Size, 4x6 inches.)

Form 11.

Class in

Memoranda of Lessons assigned

Section

Number

Month

Days of Month

NAMES

Center of book.

No. in Class

Summary

No. Recit. made

Daily average

Exam.

Monthly average

Rank

Perforated here

This blank to be torn off so as to expose the column of names at the left when the leaf is turned.

(Size of book when closed, $4^{3}/_{4} \times 8$ inches.)

This blank to be torn off.

Perforated here.

Center of book.

| No. in Class | | |

School of Nursing of _____ Hospital

Miss _____

NURSING PRACTICE

Miss _____ Class 19 ____

	Class Room	Pupil Dem.	Wd.	Wd.	Wd.
Care of room or ward					
Care of service room, bath, toilet					
Care of linen room					
Care of serving room					
Feeding helpless patient					
Bedmaking without patient					
Bedmaking with patient					
Care of bed and bedding					
Admitting patient, care of clothing, etc.					
Prep. for and assisting with tub bath					
Bed bath and toilet					
Moving and lifting patient in bed					
Moving and lifting patient to chair					
Moving and lifting patient to stretcher					
Use of pillows, pads, air cushions					
Use of back rest, cradles					
Special care of back, mouth, teeth					
Preparation for the night					
Washing the hair					
Preparation for physical examination					
Preparation of specimens					
Charting					
Temperature, pulse, and respiration					
Care of rubber goods and use					
Solutions					
Sterilization and care of instruments					
Disinfection of excreta					
Disinfection of clothing					
Application of fomentations					
Application of turpentine stupes					
Application of cold compresses					
Giving foot bath					
Mustard plaster					
Linseed poultice					
Use of cautery					
Preparation for operation					

	Class Room	Pupil Dem.	Wd.	Wd.	Wd.
Expression of stomach contents					
Stomach lavage					
Stomach gavage					
Simple enema					
Small enema, oil					
Small enema, nutritive					
Small enema, starch					
Enteroclysis					
Colon irrigation					
Vaginal douche					
Sponge bath					
Typhoid tub bath					
Alcohol sponge					
Cold pack, temperature					
Cold pack, sedative					
Hot pack, dry					
Hot pack, moist					
Giving of medicines					
Croup tent					
Inhalations					
Hypodermic injections					
Gynec. positions, prep. for examination					
Catheterization					
Catheterization for specimen					
Bladder lavage					
Surgical dressings					
Preparation for plebotomy					
Preparation for blood culture					
Preparation for lumbar puncture					
Preparation for hypodermoclysis					
Preparation for paracentesis, chest					
Preparation for paracentesis, abdomen					
Cupping					
Administration of oxygen					
Care after death					

(Size, 4x11 inches; both sides used.)

(Reverse side of Form 12.)

School of Nursing of **Hospital**

STAFF PHYSICIAN'S CERTIFICATE

Nurse's Name

Family History

Cardiac System

Respiratory System

Nervous System

Urinalysis

Miscellaneous

Recommendation

Signed

Date 191

(*Note.* *Physical examination of probationers at end of preliminary period.*)

(Size, 8x11 inches.)

Form 11.

School of Nursing of Hospital

Month _____ 191____

Daily Time Book

Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Remarks

(Size, 8x13 inches. The space for "Remarks" may be extended 2 additional inches.)

MONTHLY RECORD

Form 15.

Name_____ Class_____

_____ School of Nursing.

First Year

191 From	To	SURGICAL Men D.	N.	Women D.	N.	Disp	Eye and Ear	Nose and Tho't	O. R. D.	MEDICAL Men D.	N.	Women D.	N.	Disp D.	CHILDREN Surgical D.	N.	Medical D.	N.	Orthoped. D.	N.	Disp D.	OBSTETRICS Women D.	N.	Babies D.	N.	MENTAL Men D.	N.	Women D.	N.	TUBERCULOSIS D.	N.	COMMUN. DISEASES D.	N.	PRIVATE ROOMS D.	N.	Diet Kitch D.	Pharmacy	Soc. Service	ILLNESS	VACATION	ABSENCE
Total																																									

Second Year

Total																																									

Third Year

Total																																								

(Size, 8x11 inches.)

Form 16.

School of Nursing of _____ Hospital

Date _____
Ward _____
Service _____

EFFICIENCY RECORD

Miss _____ Class _____

Personality

(Underscore grade which may apply.)

Enthusiastic	very	moderately	lacking
Sympathetic	very	moderately	lacking
Even tempered	always	fairly	irritable
Fretful	very	fairly	blundering
Adaptable	very	moderately	inflexible
Sense of humor	much	little	unduly serious
Resourceful	very	moderately	dependent
Industrious	very	moderately	indolent
Dignified	always	moderately	undignified
Personal neatness	marked	moderate	slovenly
Courteous	always	generally	discourteous

Professional Fitness

Accurate	very	fairly	inaccurate
Punctual	always	fairly	tardy
Neat worker	very	fairly	careless
Rapid worker	very	fairly	slow
Reliable	very	fairly	irresponsible
Conscientious in detail	very	hardly	not at all
Takes criticism	in good spirit	poorly	resents
Initiative	excellent	some	none at all
Loyal	very	hardly	disloyal
Memory	excellent	fair	forgetful
Power of observation	excellent	fair	unobservant
Interested in work	very much	blase	lacking

Remarks _____

(Size, 4x11 inches.)

Miss _____ Class _____

Good Points

(That will make for student's success—underscore.)

Good health	Professional attitude
Address	Cheerfulness
Intelligence	Wins cooperation
Culture	Stimulating to associates
Executive ability	Interested in people
Good technical work	

Weak Points

(That will make for student's failure—underscore.)

Poor health	Immature
Nervousness	Talks too much
Languidness	Self-centered
Lack of interest	Aggressiveness
Poor technical work	Diffidence
Questions authority	Insincerity
Lack of promptness	Antagonizes people

Remarks _____

_____ Head Nurse

(Reverse side of Form 16.)

Form 17.

Service _____ **School of Nursing of** **Hospital** Miss _____

Ward _____ Class _____

No. of Bed	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Disease																						
Day of Month																						
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
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30																						
31																						

(To be torn off at perforated line.)

SUMMARY OF CASES

Month _____ 191 ____ Miss _____ Service _____ Ward _____

No. of cases	Diagnosis (alphabetically arranged)	No. of days	No. of cases	Diagnosis	No. of days	No. of cases	Diagnosis	No. of days	No. of cases	Diagnosis	No. of days

(Size, 8x13 inches. The space for "Summary of Cases" may be lengthened 2 additional inches.)

Form 18.

School of Nursing of _____ Hospital

Name _____ Summary Card _____ Class _____

SUBJECTS	Number of hours of instruction															Final Rating
	Total			Preliminary			First Year			Second Year			Third Year			
	Lect.	Rec.	Lab.	Lect.	Rec.	Lab.	Lect.	Rec.	Lab.	Lect.	Rec.	Lab.	Lect.	Rec.	Lab.	
Anat. and Phys.																
Bacteriology																
Hygiene																
Household Economy																
Chemistry																
Dietetics																
Mat. Med.																
Massage																
Nurs. Principles and Methods																
Elem. Pathology																
Med. Nursing																
Commun. Diseases																
Pediatrics																
Psychiatry																
Spec. Therapeutics																
Surg. Nursing																
Gynecology																
Orthoped. Nurs'g																
Obstet. Nursing																
E. & E., N. & T.																
Occup'l. Skin, and Venereal Dis.																
Prin. of Ethics																
Elem. of Psychology																
Hist. and Social. Basis of Nurs'g																
Mod. Soc. Prob.																
Profess. Prob.																
Emerg. Nurs. and First Aid																

SUMMARY OF PRACTICAL WORK

	No. Days		No. Days
Medical — Men		Obstetrics — Women	
Medical — Women		Obstetrics — Babies	
Medical — Hydrotherapy		Obstetrics — O. R.	
Medical — Dispensary		Psychiatric — Men	
Surgical — Men		Psychiatric — Women	
Surgical — Women		Tuberculosis	
Surgical — Eye and Ear		Commun. Diseases	
Surgical — Nose and Throat		Private patients	
Surgical — O. R.		Diet Kitchen	
Surgical — Dispensary		Pharmacy	
Pediatrics — Surgical		Social Service Dept.	
Pediatrics — Medical		Illness	
Pediatrics — Orthopedic		Vacation	
Pediatrics — Dispensary		Absence	
Gynecology		Night Duty—Total	
		Administrative experience—Total	

EFFICIENCY RECORD

a—very b—moderately c—lacking

Personality

Enthusiastic		Industrious	
Sympathetic		Dignified	
Even-tempered		Personal neatness	
Tactful		Courteous	
Adaptable			
Sense of humor			
Resourceful			

Professional Fitness

Accurate		Takes criticism	
Punctual		Initiative	
Neat worker		Loyal	
Rapid worker		Memory	
Reliable Conscientious in detail		Power of Observation	
		Interested in work	

Good Points

Good Health		Cheerfulness	
Address		Wins cooperation Stimulating to associates	
Intelligence			
Culture			
Executive ability Good technical work			
Professional attitude			

Weak Points

Poor Health		Talks too much	
Nervousness		Self-centered	
Languidness		Aggressive	
Lack of interest Poor technical work		Questions authority	
		Diffident	
Tardy		Antagonizes people	
Insincere			
Immature			

REMARKS _____

(Size, 8x11 inches.)

RECORD OF OBSERVATION OF CASES

Form 19.

MEDICAL			SURGICAL			ORTHOPEDIC			OBSTETRICS			MISCELLANEOUS		
No. cases	Diagnosis	Total time	No. cases	Diagnosis	Total time	No. cases	Diagnosis	Total time	No. cases	Diagnosis	Total time	No. cases	Diagnosis	Total time

as "one result of study by and conference with the Wisconsin University Survey." It has been put into wide circulation by the New York Institute for Public Service, with the accompanying terse comment: "In what, if any, kind of work are not such specific questions helpful?"

In many schools of nursing such a report is turned in by each head nurse every month for every pupil in her ward. Might it not be sufficient to make this report at, or just previous to, the time the pupil is transferred to another department?

CASE RECORDS (FORM 17)

The case record sheet, referred to earlier in this paper, is a decided departure from usual methods in that the pupil herself is responsible for it. The form is so arranged as to present an actual picture of the ward as it appears during the entire month.

On the first day of the month the pupil enters in each space the diagnosis of the case occupying the bed designated. A check suffices to indicate the continued occupancy. On the day the patient is discharged it is so recorded, and the new case entered when received in the ward. If the bed remains empty, the corresponding space will remain blank. At the end of the month the pupil summarizes the cases on the form provided below, the whole being verified by the nurse in charge. The summary alone is turned in to the superintendent's office, the pupil retaining the detailed form for her own use.

The pupil herself keeping this record, it is believed much greater interest in the actual cases in the ward will be stimulated. Too often does it appear that the emphasis is placed on mere ward routine. There will necessarily be promoted a certain amount of desirable discussion between the head nurse and the pupils concerning the cases in question. This of itself may tend to counteract the feeling, on the part of the nurse in charge, of a lack of responsibility for the education of the pupil, since so large a part of such duties which formerly fell to her now are placed in the hands of the instructor.

In addition, it is felt that the correlation of theory and practice may be considerably furthered by the use of these case records in the class room. In the cooperative system of training, as established in the Cincinnati College of Engineers, some points of similarity to our problem may be noted. The student divides his time between the practical work in the shop and the study of theory in the university. Experience has taught that it is necessary to have a separate set of men, known as shop coordinators, to connect the work of the shop with that of the university. These men, in the capacity of instructors, divide their time as do the students. Could such a system be applied to our schools, we should see less of class-room teaching apparently ineffective in its application to ward duty. Failing this, may not the pupil bring into the class room, with her case records, somewhat more of the problems of her ward work than is done at the present time?

From the material offering the instructor may readily select cases of special interest for intensive study, either by the individual pupil or the class as a whole. It may be understood, as a matter of routine, that any pupil may be called on to describe to the class the symptoms and treatment of cases of particular interest. The reverse side of her record may be used to jot down any points she has felt worthy of note.

SUMMARY CARD

In Form 18 is shown the final permanent record, which is practically self-explanatory. It follows closely the order adopted in the detailed forms from which it is compiled.

As regards the summary of the case records—reverse side of summary card (Form 19)—it may be decided that it is not really essential, the main objective being attained in the points just mentioned. In such case the various reports turned in at the superintendent's office may be filed, if desired, in each individual folder.

In the efficiency record summary the suggestion of a code is offered as being sufficiently significant, and affording much economy of time and space.

In the summary of the theoretical work the differentiation of lectures, recitation, and laboratory work may be noted. This is felt to be essential in that in the evaluation of a course of study two hours of laboratory work are considered as the equivalent of one hour of recitation or lecture. This again is carrying out the method followed in other educational institutions.

Vancouver General Hospital News

During the past six months the Vancouver General Hospital has seen rapid growth. Early in the year the new Convalescent Hospital, with a capacity of 200 beds, was opened up at Marpole, seven miles out. This institution, situated on a southern slope and close to the Fraser River, in the midst of a fine rural district, will surely have very satisfactory results and lessen the days' stay in the hospital. Miss E. Cottrell is in charge as supervising nurse.

Early in February the new Infants' Hospital was opened up in the West End. This hospital has a capacity of 80 beds, is arranged modernly and well equipped with ample provision for the maximum amount of light and air for the infants. Infants under 2 years are treated here. Miss Waterman, late assistant superintendent of the Rotch Memorial Hospital, Boston, is in charge. The Sick and Well Baby Clinics are held here twice a week and are now under the direction of Dr. E. D. Carder, pediatrician to the hospital. The central milk depot for the city will be situated here, and the city child's welfare nurse will work in conjunction with the clinic.

In the latter days of May the new military annex was opened up. This building is arranged with every possible modern and convenience and comfort and a thoroughly up-to-date, complete equipment has been installed, this wing costing in the neighborhood of $80,000. Already stretcher cases are arriving and soon it is expected that the 320 beds will be filled. Miss M. McLeod, late assistant superintendent of the Vancouver General Hospital, will have charge as supervising nurse.

This makes the entire institution a 1,200-bed hospital, and the work of the main building and the three branches will be carried on by the one administration.

The board of directors and the superintendent of the Vancouver General Hospital are making arrangements for a local convention of hospital superintendents and trustees, to be held in Vancouver in the near future. Possibly a British Columbia Hospital Association will be formed, and will comprise the superintendents and trustees of the seventy-two hospitals in the province. It was hoped that a convention would be held here in June, but owing to the stress of special work on the hospital authorities during the summer it will have to be deferred.

Being unable to secure a renewal of an expired lease on quarters it has occupied for the last three years, the Joplin Central Hospital, maintained at Joplin, Mo., by an organization of local physicians, has suspended service until a suitable building can be provided.

BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION

Monthly Bulletin issued from the Executive Offices
Medical Arts Building, Philadelphia, Pa
WILLIAM H. WALSH, M. D., Secretary.

Official Bulletin for June

TRUSTEES' MEETING

The board of trustees met at the Willard Parker Hospital June 9, at which time many subjects of importance to the association were discussed.

CLEVELAND CONVENTION

Regarding the nineteenth annual convention, the following preamble and resolutions were unanimously passed:

WHEREAS, On account of the existence of a state of war there have arisen many new problems and matters of the most extreme importance to the hospitals of the country, and,

WHEREAS, It is the belief of this body that an assemblage of the hospital administrators of the country will be of distinct advantage to them, to the institutions represented, and an aid to the government in its plans for preparedness; therefore be it

Resolved, That the board of trustees of the American Hospital Association hereby affirms its conviction that the nineteenth annual convention should be held in Cleveland, Ohio, September 10-15, and be it further

Resolved, That the keynote of this convention shall be the preparedness of the hospitals of the country for any exigencies that may arise as a result of the war, and be it further

Resolved, That such time as had been arranged for social entertainment should be devoted solely to the presentation and discussion of such subjects, in addition to the regular program, as may be outlined or suggested by the Council of National Defense.

The trustees urge every member of the association not only to attend the convention, but to further add to its value by bringing to it every trustee, superintendent, or other hospital official that can possibly be spared.

THE HOSPITAL STAFF

From information given by the Surgeon General of the Army at the convention of the American Medical Association held recently at New York, it is evident that within a short time it will be necessary to devise some means, very likely by act of Congress, for the selective conscription of physicians, and it would not be amiss at this time for us to consider certain matters in connection with exemptions.

One of the obstacles being met at this writing in securing a sufficient number of doctors is the plea of some that on account of their hospital connections it will work a hardship for them to be taken away.

We fully realize the importance of hospital work and the necessity for many physicians to remain at home for this duty, and already suggestions have been made through these columns for hospitals to reorganize their staffs so that each necessary hospital could maintain a complete staff and so that every possible qualified man might be released. The fact must be faced, however, that throughout the country there is an excess of so-called hospitals, some of which are conducted for the sole purpose of caring for the private patients of the physicians connected therewith. There are also a great many other hospitals doing a small amount of charity work, and a large number of special hospitals that might be advantageously closed during the present emergency, the patients patronizing them being instructed to seek treatment at one of the larger hospitals in the vicinity.

Reliable information at hand indicates, more particularly with respect to metropolitan hospitals, that a percentage closely approximating 33⅓ of all the hospital beds are vacant during the greater part of the year, and the exodus of thousands of men from those communities will largely increase this percentage. It would seem, therefore, that no great hardship would be entailed if a considerable number of the hospitals mentioned turned their work over to the large general hospitals that, under any conditions, will maintain an adequate staff, including all the special departments. Much as it may be deplored that any of the country's institutional facilities for the care of the sick should be curtailed, it is certainly possible to advance sound logical arguments in favor of this very practical procedure.

The first hospitals that should receive careful scrutiny by those who are delegated to exempt physicians should be those of a special character—gynecological, maternity, eye, ear, nose, throat, cancer, orthopedic, etc. It is no exaggeration to say that *all* of the cases treated in such hospitals can be efficiently taken care of by any well-organized general hospital, and by the adoption of such a procedure there would at once become available for the care of our sick and wounded soldiers a large proportion of physicians and surgeons of military age.

Another phase of this subject, so ably pointed out by Sir Henry Burdett, is that of operations performed that are not of an urgent nature. It must be admitted that a liberal percentage of the operations now so plentifully undertaken, particularly in gynecological clinics, are operations of convenience rather than of necessity. Many surgical procedures can, without risk of undue suffering, well wait a year or so until the war is over in order that the great army of surgeons may concentrate their energy and skill upon the saving of the lives of those of our citizens who may be wounded in war.

If hardship, unnecessary suffering, and inconvenience are to be avoided it behooves all hospital managements to carefully consider the possibility, now almost a certainty, of enforced medical service, and unless the reorganization is completed well in advance, there will be no justification for complaint after the government has commandeered the medical men of those hospitals that have not prepared for the inevitable.

It is suggested that every hospital, on the completion of reorganization, send to the War Department a list of physicians necessary for the proper conduct of the institution.

INCORPORATION OF THE AMERICAN HOSPITAL ASSOCIATION

The trustees decided, after considering the laws of various states in regard to incorporation, to recommend to the association that such steps as may be necessary for the incorporation of this association by a special act of Congress be taken if and when possible. If it is found impossible to accomplish this, it is further recommended that the organization be incorporated in the District of Columbia. This matter will be presented at the meeting in Cleveland.

COMMERCIAL EXHIBIT

A special effort is being made by this office to make the commercial exhibit one of preparedness, and every exhibitor will be requested to display those products that have any bearing upon war-time usage; for instance, it will

probably be possible to display a complete base hospital operating room, portable x-ray apparatus, emergency surgical outfits, etc. As many hospitals are or will be in the market for these things, the display contemplated will be most timely.

CAMPAIGN FOR NEW MEMBERS

The trustees decided to recommend to the association any legitimate means for the enlargement of the organization, and the campaign idea will therefore be presented to the members at the convention. It would aid our plans materially if all members of the association would send us a copy of their last annual report. Several similar appeals have been made in these columns, but up to the present time not more than a dozen have reached us. Do it now, please!

REGISTRATION BUREAU

Hospitals desiring candidates for vacant positions will save themselves much worry and expense and will confer a favor upon this bureau by advising us when vacancies occur. We have at all times the names and references of very desirable people and we are glad to supply such to any institution making a specific request to this office. One of the best references for a hospital worker is the presentation of evidence of membership in the American Hospital Association, and every candidate listed is a member in good standing.

COOPERATION WITH THE HOSPITAL BUREAU OF STANDARDS AND SUPPLIES

With the object of extending if possible the usefulness of both the American Hospital Association and the New York Purchasing Bureau, the secretary has been in communication with that bureau, submitting the results thereof to the trustees. Up to the present time nothing definite has been accomplished; however, the secretary has submitted the following recommendations, which have been approved by the board:

First: That negotiations be continued with the object of learning whether or not special rates could be quoted to new members secured by the American Hospital Association.

Second: That before such privileges are seriously considered an attempt be made to have changed those provisions of the constitution of the Bureau of Standards and Supplies depriving non-resident members of full participation in the management of the bureau.

Third: That if no mutual understanding can be reached whereby the membership of this association may receive the manifest benefits of the present agency, the secretary be authorized to formulate plans to be submitted to the American Hospital Association, for the inauguration of a service of similar nature, at such time and to such an extent as the funds of the association will permit.

The Rockefeller Foundation has recently announced, through its newly appointed president, Dr. George E. Vincent, that a new gift of $25,000,000 has been received from Mr. John D. Rockefeller, raising the total endowment to $125,000,000. It was also announced that the directors of the Foundation have set aside $10,000,000 to meet present and future obligations arising out of the war. According to Dr. Vincent, the Foundation is particularly interested in the proposed mobile motor hospital of the Yale Medical School, designed for military purposes, and with which it will be possible to set up 100 to 200 beds with a complete operating room and food kitchen close to the firing line on very short notice. A hospital of similar type is said to have been already successfully developed by the French.

STATE OF OHIO TO STUDY PROBLEMS OF HOSPITALS, MEDICAL LICENSURE, AND EDUCATION

Governor Cox Appoints a Voluntary Committee to Study System and Laws Relating to Public and Private Hospitals, and Medical Licensure and Education

In view of the lack of available information relating to public and private hospitals, medical licensure, and medical education, and the laws relating to these subjects in the state of Ohio, Governor Cox of that state has appointed a committee to study the subject. This committee consists of Mr. Howell Wright, secretary of the Cleveland Hospital Council, and Mr. George V. Sheridan, executive secretary of Ohio State Medical Association. The committee is to make a survey covering the following subjects: (1) the present system and laws relating to the incorporation, licensing, inspection, supervision, and regulation of public and private hospitals; (2) the present system and laws relating to medical licensure and medical education and the education and licensure of those who treat the sick public by systems of healing other than medical. The committee is to make the survey in cooperation with the members of their respective organizations and is to endeavor to secure the cooperation and approval of the leading authorities of the state interested in such matters. The findings and recommendations are to be reported, if possible, on or before January 1, 1918.

THE FEEBLE-MINDED IN COURT

Society's Irrational Methods of Dealing With Its Weaker Members—Hospital Treatment Needed

Dr. V. V. Anderson, medical director of the Boston Municipal Court, states in the *Boston Medical and Surgical Journal* that, out of a group of 1,000 offenders, he found 36 per cent feeble-minded. This, he remarks, does not represent the percentage of feeble-mindedness among offenders in general. The study was made on a selected group of difficult cases, as are other studies made on inmates of penal institutions. The most reliable work indicates that not more than 10 percent of all offenders are feeble-minded, but this 10 percent gives almost as much trouble as all the rest put together.

Dr. Anderson presents data of 100 cases drawn from his files. All these feeble-minded persons early showed deviations from the normal. Only 7 percent reached the eighth grade in school; 68 percent were unable to get further than the fifth grade. Seventy-five percent were not self-supporting. All were as unable to learn from life as from school. Whether placed on probation, sent to prison, or reprimanded by the judge and the cases placed on file, the effect seemed the same: the men were back in court at the earliest possible moment. These 100 delinquents had been arrested altogether 1,825 times; they were placed on probation 432 times; they received 735 sentences (amounting to a total of 106 years), not including 250 indeterminate sentences. Though all were adult in years and physical development, 75 percent had the mental level of children under 10 years. The failure to recognize in time the mental arrest of these persons has robbed them of whatever chance of improvement they once had—for they might once have been made happy and useful in a limited environment suited to their limited capabilities. Still, Dr. Anderson believes, it would be more economical, even now, to provide suitable hospital care for these unfortunates than to go on forever locking them up in jails and turning them out again.

HOSPITAL, MEDICAL, AND SPECIAL MEETINGS

OHIO STATE HOSPITAL ASSOCIATION

Interesting and Profitable Program Presented at the Third Annual Meeting in Columbus

The Ohio State Hospital Association held its third annual meeting in Columbus May 22 to 24. The meeting was called to order Tuesday afternoon by the president, Rev. A. G. Lohmann. A welcome was extended to the association on behalf of the city of Columbus by Mayor Karb. Papers on "The Building of the American Hospital" were presented "From the Viewpoint of the Superintendent" by Mr. F. E. Chapman, superintendent of Mount Sinai Hospital, Cleveland, and "From the Viewpoint of the Architect" by Mr. Charles F. Owsley, architect and designer of St. Elizabeth Hospital, Youngstown. The papers were discussed from the viewpoint of the visiting staff by Dr. J. F. Baldwin, member of the medical staff, Grant Hospital; and from the viewpoint of the nurse staff by Miss Harriet L. Friend, chief nurse examiner, State Medical Board, Columbus; and others.

At the evening session of the same day the secretary, Mr. Howell Wright, presented the report of the executive committee, and the report of the auditing committee was also heard.

A paper was presented by Dr. Robert G. Paterson, secretary of the Ohio Public Health Federation, Columbus, on "State Resources and Needs for the Care of the Sick Who Cannot Be Properly Cared for in the General Hospital." Dr. Paterson discussed the problems of infirmary hospitals, contagious disease hospitals, hospitals for the insane, for the feeble-minded, for the epileptic, for the tuberculous, for crippled and deformed children, etc. He concluded that the greatest need of Ohio in the hospital field today is the establishment of a central bureau in some state department, preferably the state department of health, where the facts relating to hospital service through the entire state may be regularly and systematically gathered and where some degree of control over hospital organization and management may be exercised. The discussion of this paper was opened by Dr. Charles H. MacFarland, Jr., superintendent of Cleveland City Hospital.

A paper on "The Place of the Individually Owned and Operated Hospital in the Community" was then read by Dr. Ben McClellan, member of the State Medical Board, Xenia. The discussion of this paper was opened by Miss Mary Roberts, superintendent of Holmes' Private Hospital, Cincinnati.

On Wednesday morning, May 23, a letter was read before the association from Emma A. Andrews, superintendent of the New England Baptist Hospital, protesting against the ruling made by the American Red Cross providing that only nurses who have graduated from hospitals having a daily average of fifty patients shall be eligible for Red Cross service. The communication was referred to the committee on resolutions.

The program was continued by a round-table discussion under the chairmanship of Dr. A. C. Bachmeyer, superintendent of Cincinnati General Hospital. The first subject presented was "The Care and Control of Hospital Linen,"

MR. F. S. BUNN,
PRESIDENT OHIO HOSPITAL ASSOCIATION,
Superintendent City Hospital, Youngstown.

by Dr. A. R. Warner, superintendent of Lakeside Hospital. A very interesting and practical discussion followed.

Mr. P. W. Behrens, superintendent of Toledo Hospital,

DR. E. R. CREW.
SECRETARY-TREASURER OHIO HOSPITAL ASSOCIATION,
Superintendent Miami Valley Hospital, Dayton.

Toledo, then spoke on the question "How to Meet the Increased Cost of Hospital Operation." This also was followed by a profitable discussion.

Sister M. Genevieve, of St. Elizabeth's Hospital,

Group picture of persons attending the annual convention

Youngstown, discussed "Labor-Saving Devices in Hospitals."

A paper on "Economy in Preparation and Saving of Food" was read by Miss Lulu Graves, dietitian of Lakeside Hospital, Cleveland, and editor of the Department of Dietetics in THE MODERN HOSPITAL. Miss Graves made a strong point of the necessity of distinguishing between practical and theoretical economy and of figuring the expense of labor.

Mr. F. S. Bunn, superintendent of Youngstown City Hospital, spoke on "The Hospital's Responsibility for Giving Out Prompt and Reliable Information." He said that, while it was necessary to be very careful about the giving out of information to newspapers, it was found that often lack of information gave rise to suspicion. There was need for tactful and careful handling of the question.

At the end of the round-table discussion Mr. Howell Wright offered a resolution that the Ohio State Hospital Association offer to the National Council of Defense and to the Governor of Ohio their hearty cooperation and assistance in whatever way it might be desired.

Luncheon was served at Memorial Hall. The afternoon was devoted to an automobile ride and visit to state institutions, and the evening to an informal banquet at the Hartman Hotel.

At the banquet session Dr. John G. Bowman, director of the American College of Surgeons, read a paper on "The Place of the Americal Hospital in Medical Education." Dr. Bowman emphasized the responsibility of the hospital toward the intern in the way of creating a fine ideal of service, giving him laboratory training, prohibiting fee splitting, and keeping accurate records.

Dr. John M. Baldy, president of the Pennsylvania Bureau of Education and Medical Licensure, then read a paper on "The Equipment of the Modern Hospital for Purposes of Medical Teaching." Dr. Baldy asserted that an active, intelligent, and willing medical and surgical staff was the most potent item of equipment of a hospital for teaching purposes. He also emphasized the importance of adequate histories.

At the morning session on Thursday, May 24, Mr. Howell Wright, secretary of the association, read a paper on "The Importance and Need of State-Wide Hospital Organization." Mr. Wright is a state senator and has been appointed by Governor Cox a member of a commission to work out problems involved in making the hospital survey. At the end of his paper Mr. Wright announced that he was authorized to invite the association to appoint some committee to cooperate with his own commission. The association then passed a motion instructing the executive committee to cooperate with Mr. Wright's commission.

A paper, "Qualifications Demanded of the Nurse as a Hospital Superintendent," by Miss M. A. Lawson, superintendent of Akron City Hospital, Akron, Ohio, was read in Miss Lawson's absence by Mr. Bunn.

The reports of the committees on constitution, membership, legislation, time and place, and the following resolutions were then presented and passed: a resolution requesting the officers of the Americal Hospital Association to take steps to induce the Red Cross to set aside the ruling against the eligibility of nurses who are graduates of hospitals having a daily average of less than fifty patients; a resolution that the constitution be amended so that members of the executive committee be elected to serve for a term of five years, one to be elected each year; a resolution presented by Mr. Howell Wright offering to the National Council of Defense and to the governor of Ohio the cooperation and assistance of the Ohio Hospital Association; a resolution offering the thanks of the association to all who have contributed to the success and pleasure of the meeting; and a resolution that, in view of the insufficient number of graduate and pupil nurses to provide adequate care of the sick, the association requested the state medical board not to insist on a daily average attendance of patients in any hospital as a hard and fast requirement for recognition of the training school. A resolution from the Graduate Nurses' Association of Cincinnati and Hamilton County, urging the Ohio Hospital Association to uphold present standards of nursing training (having particular reference to American Red Cross standards), was read, but not acted on. The committee on nominations presented the following names for offices for the ensuing year:

President, Mr. F. S. Bunn, superintendent City Hospitals, Youngstown; first vice-president, Rev. C. H. LeBlond,

of the Ohio Hospital Association, Columbus, Ohio.

St. Anthony's Home, Cleveland; second vice-president, Miss Alice Thatcher, superintendent Christ's Hospital, Cincinnati; third vice-president, Miss L. J. Napier, superintendent City Hospitals, Springfield; secretary-treasurer, Dr. E. R. Crew, superintendent Miami Valley Hospital, Dayton. Executive committee: Rev. A. H. Lohmann, superintendent German Deaconess Hospital, Cincinnati; Rev. M. F. Griffin, Youngstown; Dr. A. R. Warner, superintendent Lakeside Hospital, Cleveland; Miss A. L. Lawin, superintendent Franklin County Tuberculosis Hospital, Columbus; Dr. M. F. Marting, Keller Hospital, Ironton.

Cleveland was selected as the next place of meeting.

The meeting was not as largely attended as might have been desired, only 77 members being present. The scanty attendance was in part made up for by the earnest efforts of the officers in the interest of the members. Miss Mary E. Jamieson, chairman of the local committee on arrangements and entertainment, earnestly presented the claims of the exhibitors in the commercial exhibit for recognition by the members, appealing that everyone present do their buying for the next six months from the exhibitors.

The papers read in themselves compensated the members for the trouble in attending. Most of these papers and the discussions will be published later in THE MODERN HOSPITAL.

AMERICAN MEDICAL ASSOCIATION

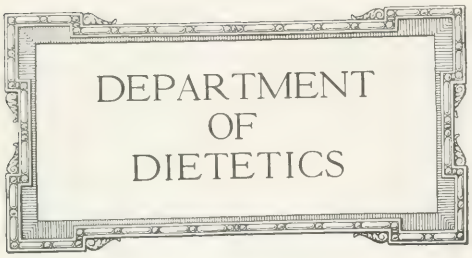
Sixty-eighth Annual Session Held in New York—Officers Elected

The American Medical Association held its annual session in New York, June 4 to 18. The following officers were elected: president-elect, Arthur D. Bevan, Chicago; first vice-president, E. H. Bradford, Chicago; second vice-president, John McMullen, U. S. Public Health Service; third vice-president, Lawrence Litchfield, Pittsfield, Mass.; fourth vice-president, Holman Taylor, Fort Worth, Texas; secretary, A. R. Craig, Chicago; treasurer, W. A. Pusey, Chicago; chairman of the house of delegates, Hubert Work, Pueblo, Colo.; vice-chairman of the house of delegates, Dwight H. Murray, Syracuse, N. Y.; members of the board of trustees, Philip Marvel, Atlantic City, N. J.; W. T. Sarles, Sparta, Wis.; H. Bert Ellis, Los Angeles, Cal., and (to fill the vacancy caused by the resignation of Dr. W. T. Councilman) Wendell C. Phillips, New York; member of the judicial council, Randolph Winslow, Baltimore; member of the council on health and public instruction, Walter B. Cannon, Boston; member of the council on medical education, William Tucker, Philadelphia, and (to fill the vacancy caused by the resignation of Dr. A. D. Bevan) H. Gideon Wells, Chicago; member of the council on scientific assembly, E. S. Judd, Rochester, Minn.

The Nurse-Midwife

The midwife question, says Dr. Fred J. Taussig in the *Public Health Journal*, must be solved independently of the interests of any special class, whether that special class consists of general practitioners or incompetent midwives. He suggests the establishment of schools of midwifery, admission to which would be limited to graduate nurses. Curriculum would include attendance for six months to a year; entire charge of at least thirty cases of normal confinement, a number of which should be out-clinic cases; a systematic course of lectures and demonstrations; thorough hospital training in diagnosis; special work in treating of emergencies; etc. The class of women drawn into such work would be greatly superior to the class of ordinary midwives. "It is better to train the nurse to do midwifery than to attempt to teach the midwife some of the rudiments of nursing." Dr. Taussig believes that the nurse-midwife would be better fitted for normal obstetrics than the majority of general practitioners. Most general practitioners dislike obstetrics. They have not had the training in rigid asepsis which has been given to the nurses. In cases of complications the general practitioner will, as a rule, try to get along by himself and often attempt operations which he is not qualified to perform. The nurse-midwife realizes her own limitations and can be trusted in the presence of serious complications to send for the specially trained obstetrician.

Cato said that the best way to keep good acts in memory was to refresh them with new.—Bacon.



Conducted by MISS LULU GRAVES.
Dietitian of Lakeside Hospital, Cleveland, Ohio.

Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, Ohio.

The Conservation of Food

BY DR. J. A. WESENER AND GEORGE L. TELLER, of the Columbus Laboratories, Chicago

Now that the country is at war and each and every citizen is called upon to do his bit, the problem of feeding our own and the other peoples of the world becomes a very vital issue. While agriculture, in some lines, no doubt, will be materially increased, the prospect in the cereal line does not at the present writing look very hopeful. Our winter wheat crop, as estimated by the United States Agricultural Department, is about 70 percent of that of last year. There are certain sections in which the winter wheat was completely destroyed. In the Southwest, the wheat outlook is very poor. What the yield will be in the Northwest, where the spring wheat is raised, is at this writing very problematical. In the year 1915 the wheat crop of this country was 1,010,000,000 bushels. That of 1915 was only a little over 600,000,000 bushels, a loss of nearly 50 percent. Last year's corn crop, while very large, nevertheless did not equal the crop of 1906. Illinois, which is one of the best corn states in the Union, has fallen behind in corn production in the last ten or fifteen years between 10 and 15 percent. It has also fallen behind in cattle-raising to the extent of nearly 40 percent. While our country has been increasing in population, the food production has not kept pace with it. It is estimated by conservative economists that, while the population in the last fifteen or twenty years has increased 20 percent, the food production during that period has increased only 1 percent. These are startling figures, and some radical steps will have to be taken to arouse the country to realize just what we have to face and thereby find ways and means to combat this condition. All of the surplus of food the world over has been used up. The larders are empty. The world has nothing on hand to tide it over should the next crop be a failure. When you consider that 30,000,000 people are fighting and a large proportion of the remainder are employed in industries other than those of agriculture, one can readily understand what the suffering will be among people of the earth for the next few years.

This being the case, it is of vital importance to conserve all food and utilize such foodstuffs by blending, improved manufacture, or otherwise, so as to add to and lengthen out wherever it is possible. Much of the waste in manufacture, known as by-products, can be worked over in such a manner as to produce wholesome food, and in that way increase the quantity.

The various cereals which may be used as foodstuffs in this country include wheat, corn, oats, barley, rice, and minor quantities of other grains closely related to corn, namely, kaffir, milo and feterita. Wheat is the leading breadstuff because of the character of the flour produced from it. It differs from all the other grains in that the protein coagulates with water and forms an insoluble, tenacious mass known as gluten. The gluten fits it for making a light, porous loaf of bread, such as none of the others will make. If judiciously blended with suitable products of other cereals, it is capable of imparting this quality to the blend, thus enabling us to make a satisfactory use of such grains as foodstuffs in a manner which otherwise would not be possible. Corn is the cereal most abundantly produced in this country, and the average amount in bushels is from three to four times that of wheat. The average yield per acre is nearly twice that of wheat, and the average cost of production per acre is not greatly in excess, so that it is much more economical, and, on the whole, a more certain crop to produce. Oats are second in the number of bushels, but, being of lighter weight and containing a considerable percentage of worthless offal, they are able to yield a supply of human food only approximately close to that of wheat.

The food produced from each of these grains has a distinctive flavor characteristic of the grain itself, and the characteristics of each grain determine to a large measure the purpose to which it is put. Oats have been developed into a breakfast cereal. Buckwheat is used almost wholly for griddlecakes. Barley, when used as a food, becomes an ingredient of soups, as pearled barley, and is extensively used by some classes of people as a breakfast cereal. Corn by itself is used in the form either of mush or of some special type of bread known as johnny-cake or hoecake or corn pone. These breads have a distinct corn flavor, are most palatable when hot, and lack other qualities characteristic of wheat bread. All of these grains serve an important secondary purpose for food, as when used in the production of meat, milk and eggs, and all of them when used as human food can most advantageously be divided into two parts, that which may be used as human food direct and that which is best adapted for stock-feeding. The proper adjustment and distribution of these two classes of foodstuffs is of vital importance in providing for the economic food supply of the nation.

In the usual process of wheat milling, from 70 to 75 percent of the wheat is converted into white flour. The average amount of wheat necessary to produce a barrel of flour of all grades is approximately 4½ bushels, varying with the quality of the wheat and the details of milling. Ordinarily this flour will be divided into two or three grades, the whitest and finest flour being called patent, the intermediate flour clear grade, and the poorest flour low grade. The first two of these flours are commonly blended together in the making of a straight grade, as it is called, but sometimes all three grades are united in this manner to make a full straight. The first of these grades sells for the highest price, because it is the most costly to produce. It is ordinarily used as a high-class bread flour and for domestic purposes. The straight grade is also a very satisfactory bread flour and answers well nearly all purposes for which the flour is used. In this country clear flour is used largely in connection with rye flour for making rye bread. The low-grade flour may be used for this purpose or for blending with the flour of other grains in the preparation of self-raising griddlecake flours. So far as nutriment goes, there is not a marked difference in the three grades. The poorer grades contain more of the protein and mineral matter, while the patent flour contains the least of these ingredients. Patent flour is desired by many people because of its attractive appearance, excel-

lent flavor, and splendid baking qualities. The bread from a straight-grade flour is not greatly deficient in appearance and is hardly inferior in flavor to that from the patent flour, but it is darker in color. If low grade is added in making a full straight, the color becomes still darker and the flavor may be somewhat changed. If more of the wheat grain is used in the making of flour, these defects are necessarily increased.

That portion of the wheat which is not included in the flour is generally divided into two parts, the bran and the shorts. Both contain some flour, but it is difficult to recover this flour without incorporating too large a proportion of the bran. The shorts are really a mixture of flour, fine bran, and the germ of the wheat. They have splendid food value, but are better adapted for feeding to domestic animals than for human food. The presence of this material in flour detracts from the appearance of the baked product and may greatly change the flavor of it, while if the germ is incorporated in the flour the flour is apt to become rancid because of the excess of oil which it contains. Flour made by incorporating too large a proportion of the coarser part of the wheat grain cannot be as finely bolted as that from which this is excluded. For this reason the eggs of the flour beetle and other insects find their way into it, and whole wheat and graham flours are known to become wormy much more quickly than the better grades of white flour.

From 40 to 50 percent of commercial bran and from 20 to 30 percent of shorts consist of woody material which does not furnish any nutriment when used as human food. To include it in a shipment of flour, which often travels a distance of many hundred miles, necessitates the payment of transportation charges and the providing of transportation facilities for an enormous amount of worthless matter. This for graham flour would amount to the weight of one barrel or more in every ten. The growing of a wheat crop removes much fertility from the soil, and the elements of fertility which are thus removed are concentrated to a large extent in the bran and shorts. When these products are used as human food, these elements of fertility are almost wholly lost to the soil, but if used for the food of domestic animals, they may be largely returned to it.

[To be continued.]

The question of properly feeding the people of our homes as well as of institutions has become a problem of grave concern. Our newspapers and magazines are publishing numerous articles giving advice about buying and suggestions for menu regulating, many of which are very valuable. While these articles are being eagerly read, we find few people who are really cheerfully submitting to a curtailment of the amount of food served to them or who are willing to substitute anything of which they are not particularly fond for the things that they do enjoy or have been having on their menus regularly.

Much attention was given the experiment conducted last fall in Chicago by Commissioner of Health, Dr. John Dill Robertson, showing that adequate meals could be served for 10 cents each. As this was given sufficient publicity at the time, we shall not go into detail concerning it. It was definitely demonstrated, however, that twelve adults engaged in a variety of occupations, some indoor and some outdoor, and including both sexes, could be adequately fed for fourteen days for 31 cents a day, if the food were intelligently bought and proper thought given to the preparation and serving of it.

A very good account of this is given in the March number of the *Hotel Monthly;* the menus are given and recipes for the various things served. A most valuable feature of this account is the publication of a letter to Dr. Robertson from Professor Kinsey of the Valparaiso (Ind.) University. In this letter Professor Kinsey says:

"To my mind, however, the question of feeding people on 35 cents or 40 cents a day was not the most important one, so long as the price was kept approximately in that neighborhood. I think the great lesson to be learned from the demonstration is the very great lesson of efficiency and high skill as the result of careful, scientific training.

"We are saying the word 'efficiency' so much that possibly to some it may seem a very poor type; but, after all, it is the everlasting word of all the ages, and in only very recent times has it begun to receive that prominence it should have and which it must have more and more. . . . The great problem of humanity is the dignifying of all activity with thorough training and then no one will be ashamed of work, but all will fully enjoy any kind of needed activity. . . .

"Let me repeat that I think the most important lesson coming from this experiment is the old, old one, that skill always wins. The moral lesson to the city of Chicago and to the whole nation is that we must emphasize more and more the training of domestic science in all our schools, both public and private. . . .

"May there not come a time in the history of the country when the young man's knowledge of his ability to make a living, and the young woman's ability to make a home, especially in the matter of food, should be tested by some examination or method through which this ability may be demonstrated? I am sure there would be very much less suffering in the world, many, many fewer divorces, and much more happiness."

It would seem that the "time in history" referred to is at hand, probably much sooner than Professor Kinsey anticipated. At any rate, this is a most propitious time for a vast number of people to adopt a sane and simple method of living, and it is human nature to do a thing more willingly if one knows why one is doing it. To become informed about food composition, food values, and methods of cooking will naturally bring about a desire to live rationally and convince one of the harm which inevitably results from continued abuse of the digestive organs.

Furthermore, it is gratifying to know that hotel men are giving some attention to the subject of correct feeding. So long as the public can get anything and everything it wants and can be enticed into eating much that it does not want and should not have, just so long are we going to have perverted appetites. And the appetites are so badly perverted that the same service is being asked for in our hospitals as is given in our hotels and other public eating places. The average patient does not stay in the hospital long enough to be educated into eating the proper things, unless possibly he be a patient with some metabolic disease; so we who are in the hospitals are glad to see this movement on the part of hotel men.

In the June issue of the *American Journal of Medical Sciences* is an article by W. G. Bateman, Ph. D., Missoula, Mont., on "The Use of Raw Eggs in Practical Dietetics." This is a report of work done by Mendel, Osborne and others at the Sheffield Laboratory of Physiological Chemistry at Yale University, first, by experimenting with animals, then by using men and women as subjects to determine whether their conclusions were equally applicable to man. They found that raw egg white has an action in the body different from other proteins. Though raw eggs have been much used in the diet of the sick, these experiments show that native egg white is an indigestible substance, and that it is poorly utilized by the body. When given in very considerable quantities it caused diarrhea

and sometimes vomiting; the whites of two eggs might cause softening of the feces; even if small quantities were given it would be recovered unchanged in the feces. Little difference was shown whether the egg white was eaten alone or mixed with other food, except that a longer time elapsed before diarrhea appeared if it were mixed with other food.

Cooked egg white causes an abundant secretion, and unites readily with hydrochloric acid; when raw and cooked egg white were used alternately in the diet, a marked difference in the utilization and nitrogen balance was seen. Cooked egg white was found to be well absorbed, with no difficulties in digestion noticeable. One explanation offered is that the sulphur complexes in the uncoagulated egg white have power to withstand the digestive enzymes.

A few quotations from this article will give concisely and clearly the conclusions of the author:

"The results of the present study show these reasons [advocating the use of raw eggs] to be not well supported and indicate that the use of raw egg white is decidedly inadvisable. A substance which fails to stimulate a flow of gastric juice and is antipeptic, which hurries from the stomach, calls forth no flow of bile, and strongly resists the action of trypsin, which is poorly utilized and may cause diarrhea, has evidently little to recommend it as a foodstuff of preference for the sound person, let alone for the invalid. And when the native protein needs only to be coagulated at 70 degrees in order to obviate almost all the effects mentioned, there appears still less reason for using it uncooked. Other considerations strongly support this conclusion. For instance, Stokvis (1864) declared that raw egg white eaten in quantity is absorbed undigested and excreted in the urine, doing thereby some damage to the renal epithelium."

"It is true that fairly large amounts of raw egg white need to be ingested for the abnormal digestive effects to be made manifest; but, even if small quantities are used, certain disadvantages may follow. The indigestible protein may reach the large intestine and there become a good pabulum for the putrefactive bacteria. Or, mixed with other foods, it may retard the digestion and lower the utilization of other proteins. Again, it seems more than a coincidence that of all the common proteins egg white is the most indigestible and at the same time the most common cause of anaphylaxis. According to the latest views on this subject, as stated by Wells (1914), anaphylactic intoxication is caused by the entrance into the blood of intact, foreign protein molecules. If this be so, it would appear that egg white is a substance peculiarly apt to be the agent in allergy. It leaves the stomach practically unchanged, so that in the intestine it may be absorbed still intact or only slightly altered. The strong antitryptic action it possesses leads to the same danger. Lately, Van Alstyne (1913) has shown that egg albumen can enter into the circulation unaltered and is excreted in the urine."

"It must not be assumed from the foregoing discussion that native egg white is considered a toxic or otherwise dangerous substance. But the evidence regarding its behavior in the alimentary canal is taken to show that no advantage accrues to the body by using it raw rather than cooked. Furthermore, when the diet of those seriously ill is considered, it may fairly be asked in the light of scientific evidence if the current extensive use of raw eggs is not illogical and inadvisable."

The last unit of a complete new plant for the German Hospital at Kansas City, Mo., was dedicated May 27. The newest structure is a modern research laboratory, made possible by a gift of $35,000 from William Volker. Three hundred and seventy-five thousand dollars have been expended on the entire group of buildings, which provide accommodations for 275 patients.

George Vogan, of Fort Jones, Cal., has recently been appointed superintendent of the Siskiyou County Hospital at Yreka, Cal., vice Edward F. Brickley, resigned.

INDUSTRIAL WELFARE

WELFARE WORK OF THE NEW YORK TELEPHONE COMPANY

Hospital, Pensions, Accident and Sickness Disability Benefits, and Insurance Among Special Features—Appreciation of Employees

BY R. S. SCARBURGH, Manager Information Department, New York Telephone Company, New York.

Since the business world recognized the truth of the principle that the best employee is the one best cared for, welfare work has come to occupy a place of prime importance in the organizations of enterprising business concerns. Greater efficiency among employees, higher esprit de corps, and fewer absences because of sickness, accidents, or desire to "lay off" for one reason or another, are just a few of the results of the constructive programs that have been put into effect by our more progressive business managers, but they are of sufficient importance from any point of view to insure a continuance of the work and a gradually increasing interest in its development along systematic, scientific lines.

One of the first big business organizations to realize the value of welfare work was the Bell Telephone System. This organization, which has more than 156,000 employees, has long been a leader in developing ways and means of improving the conditions under which its employees work, and there are few companies that can boast of higher employee efficiency and greater company loyalty, individually or collectively, than exist today in the Bell family of workers.

The largest subsidiary of the American Telephone and Telegraph Company, which is the parent organization of the Bell System, is the New York Telephone Company. This company for some time has been especially proficient in welfare work, and its efforts have been frequently recognized by international authorities. In 1905 the International Exposition at Liege, Belgium, gave the company a diploma for its success in caring for employees. At the Milan (Italy) Exposition in 1906, the international jury awarded the company a silver medal for the same reason, and after the exposition Prince Cassano of Italy borrowed the telephone company's exhibit and set it up in Rome where it might serve as an inspiration to those of his countrymen who were interested in the improvement of working conditions.

At the International Exposition of Safety and Sanitation in New York City in 1913, two prizes were awarded to the New York Telephone Company. The first was a gold medal offered by the Travelers' Insurance Company and presented by the American Museum of Safety "to the American employer who achieved the greatest success in protecting the life and limbs of his employees." The second was the Grand Prize of the exposition and was given to the telephone company for its instructive exhibit and its progress in welfare work for employees.

The New York Telephone Company's welfare work, as constituted today, is unusually comprehensive. It is founded upon a consistent endeavor to house employees in fireproof buildings equipped in every possible way to insure safe, healthful, pleasant working conditions. It includes a liberal benefit fund covering sickness and accident disabilities, old age pensions, and insurance; a stock-sharing plan twice opened and each time eagerly accepted by thousands of employees; and a systematic effort to guard against sickness, accidents, and general disability. The latter includes hospital and house physician work, general first-aid provisions, and repeated instructions in first-aid methods, plus educational campaigns to make employees realize the necessity for carefulness in their work at all times.

Consistent endeavor for a considerable period of years to improve the conditions surrounding employees has enabled the New York Telephone Company to put its welfare work on a basis of high efficiency. It spends thousands of dollars annually for its workers because there are many ramifications to its welfare system, and yet the cost is small in comparison with the results accomplished. For instance, all the hospital work, nursing, and out-work for the several thousand employees who are connected, both directly and indirectly, with the headquarters offices of the company at 15 Dey Street, New York, can now be performed through a three-room hospital in charge of a trained nurse and one house physician. Such a situation

A corner of the hospital in the telephone building at 15 Dey Street, New York.

is possible only because the constant education of employees in first-aid work and avoidance of accident has been extraordinarily effective.

The nurse in charge of the hospital is the active representative of the department that is responsible for the company's welfare work. To her come officers high in the company, stenographers, bookkeepers, janitors, plant and commercial men, the rank and file of the organization. They have learned to think first of the company hospital when their ills, real or fancied, need attention. It is the confidence the employees show in the company hospital and their recognition of the fact that their employer is anxious and willing to do everything possible to take care of them that impresses the visitor.

Mrs. M. H. MacDermott, who has charge of the hospital, comes from a family of nurses. She was born to the profession, and no one needs to be reminded of the value of hospital welfare work performed by a person who is in love with her occupation. She has specialized in eye, nose, throat, and ear cases, as well as in general medical work, and previous to her connection with the telephone company was in the hospital of a large department store. She shows you the equipment of her hospital, explains the card records which she keeps on every case, tells you how she watches each subject under her care, and how her efforts dovetail with those of the house physician.

"They are the most appreciative people I have ever dealt with," she announces, and the words have hardly left her lips before the door opens and the head of a department enters. He has his throat painted, discusses his symptoms briefly and departs with expressions of gratefulness. "There is your proof," remarks the nurse.

"What impresses you most about your work with the telephone company?"

"The confidence which every employee who comes to the hospital seems to feel in it and the enthusiasm they all show for their work.

"We handle about 250 cases a month. During April we made 403 visits, 209 to women and 194 to men. We pay a great deal of attention to the teeth and send our patients to reputable dentists. Pains in the knees, legs, and ankles are frequent complaints, usually due to fallen arches, and we send such cases to orthopedists for treatment and to be fitted with proper shoes. Skin diseases due to indigestion crop out, and we put these patients on suitable diets. Tonsillitis conditions are discovered, and prompt treatment keeps the employees from sick beds. Infection due to pin pricks is also found, but we have fewer and fewer cases of blood poisoning that might assume serious proportions, simply because the employees have learned to come to the hospital when the infections are in their infancy. Epistaxis, ptomaine poisoning, foreign substances in the eyes —these are other typical cases that come to our attention."

In two instances Mrs. MacDermott discovered trachoma and by prompt action prevented the possibility of the spread of this contagious disease. This case alone would serve to prove the value of the hospital work.

Supplementing the central hospital there are emergency kits in readiness wherever they may be needed. The employees are taught the use of these kits, records are kept and posted of accidents, and lectures are given by experts, while the company's monthly magazine prints series of illustrated articles on accidents and how to avoid them.

One of the interesting features of the Bell System's welfare work is the plan established in December, 1912, that provides for pensions, accident disability benefits, sickness disability benefits, and insurance for all Bell employees. A fund of $10,000,000 has been set aside for the work, and this sum is kept intact by means of annual payments made proportionately by each company in the Bell System. The New York Telephone Company's share of the fund totals $2,000,000. No part of the expense of the plan is borne by the employees. Under its terms, male employees who have reached the age of 60 years and who have been twenty years or more in service may retire on pensions. They may be retired at the option of the company at 55, if they have served twenty-five years. The pension age of females in each case is five years younger than that of male employees. Any employee who has been thirty years in service, regardless of age, may be pensioned on the approval of the president of the company. The amount of the pension is based automatically on the years of service and is equal to 1 percent of the average annual pay for ten years, multiplied by the number of years of service. No pension is less than $20 a month.

Employees subjected to accidents occurring in and due

to the performance of work for the company receive for total disability full pay for thirteen weeks and half pay thereafter so long as the disability remains. If the disability is temporary, the employee receives full pay for thirteen weeks, and half pay until able to earn a livelihood, not exceeding six years.

Employees disabled by sickness or accident outside of the regular course of duty after ten years or more in service receive full pay for thirteen weeks and half pay for thirty-nine weeks; if from five to ten years in service, full pay for thirteen weeks and half pay for thirteen weeks; if from two to five years in service, full pay for four weeks and half pay for nine weeks. In the case of employees who have not been two years in service, heads of departments are permitted discretion in continuing pay during temporary illness.

In the case of death resulting from accident in and due to performance of work for the company, insurance amounting to three years' pay is paid to the dependents of the employee, the maximum payment being $5,000. In the case of death resulting from sickness or accident outside of business, the payment is equal to one year's pay for employees who have been ten years or more in service, and one-half of one year's pay for employees who have been from five to ten years in service, the maximum payment being $2,000. If any state statutes provide for more liberal compensation than is provided under the benefit plan, the statutory provision prevails. Where the employees have legal rights, as in some accident cases, they have the option of exercising such rights or accepting the company's benefits. The administration of the funds is in the hands of an employees' benefit fund committee of five, appointed by the board of directors of each company in the Bell System.

The benefit fund committee, which serves the New York Telephone Company and the other companies in what is known as the eastern group of Bell telephone companies, operating in New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, District of Columbia, and part of Ohio, reported for the year ending December 31, 1915, as follows: number of employees, 47,195 (men 20,105, women 27,090); number of employees placed on pension rolls in 1913, men 15, women 4; during 1914, men 40, women 11; during 1915, men 8, women 5; number remaining on rolls at end of 1915, men 62, women 20.

The number of accidents showed a gratifying decrease during 1915, proving the effectiveness of the work being carried on to reduce accidents. With a larger working force in 1915, the number of accidents decreased 16 percent. By years, the number of accidents on which benefits were paid was as follows: 2,163 in 1913; 2,343 in 1914; 1,959 in 1915. These totals included accidents of every description, and in many cases the employees received first-aid treatment but did not lose any time, while in others the employees returned to work within a short period. The number of serious cases was small. During 1915 there were 5,777 cases of sickness reported, but the majority were seasonal diseases, such as grip. Deaths for the year totaled 69. All payments from the benefit fund during the year to employees in the eastern group of Bell companies amounted to approximately $453,450. Since the inception of the benefit fund plan, benefits amounting to $3,779,896 have been expended under its provisions to employees throughout the Bell System.

The 1915 annual report of the American Telephone and Telegraph Company contains some interesting figures relating to the benefit fund. At the close of the year, 257 former employees were on the pension rolls; 54 have been added and 10 discontinued during the year. The average pension paid was $44 a month. During the year there were 15,325 cases of sickness for which benefits were paid under the plan. The average period of disability for completed cases was thirty-eight days, and the aggregate benefits paid were $723,759.

There were 7,705 accident cases, of which comparatively few were serious. In one-third of the cases the employees went back to work within a day. In over two-thirds of the cases the period of disability was not over a week. Of the total number of accidental injury cases, 36 resulted fatally. These fatal cases were as heretofore chiefly from contact with the high-tension currents of power and lighting companies. The number was less than in previous years "partly perhaps because of less construction work in 1915, but more especially, we think, because of the progress made in eliminating unsafe conditions of plant and the greater care urged on all plant employees with respect to the prevention of accidents." The total payments on account of accidental injuries were $429,283, including $108,699 for medical attendance, hospital care, and other expenses incurred in aid of those injured.

The number of employees of five years' or more service who died during the year (not including the accident cases mentioned above) was 166. Of these, 138 left dependents to whom was paid $111,384. Burial expenses for those leaving no dependents were $4,248, a total of $115,632.

The total amount paid during the year from the benefit plan funds was $1,397,742. This does not include the expense of administration of the funds or the general medical supervision and assistance given by some of the companies. "Financial assistance is also given in many cases of illness which do not come wholly within the limitations imposed on the employees' benefit funds. These are chiefly the cases of employees who have been in the service less than two years, or whose illness continues for long periods, or who in other ways are not cared for by the regular system. Plans for systematizing and extending the assistance given in such cases and for giving such medical assistance as will tend to decrease or prevent illness are under consideration."

The stock-sharing plan was inaugurated January 1, 1915, to give employees an opportunity to become part owners of the business on easy terms. Of approximately 78,500 employees then eligible under the plan, nearly 34,000 purchased stock. Afterward so many requests for the extension of the plan were made that it was opened again March 1, 1916. A total of 33,000 shares were made available, and of these 10,548 were taken by employees of the New York Telephone Company and its affiliated companies.

Only those employees who had been in service two years were eligible to take advantage of the plan. When it was first offered, the stock was made available at a price about $6 a share less than the market quotations. The second offering came at a time when the stock was selling at about 127; it was offered at $118 a share to the prospective employee-stockholders. Each employee was enabled to purchase one share for each $300 of annual wages, but not exceeding ten shares, and paid for it at the rate of $2 a share a month, dividends applying toward payment, while interest at 4 percent was charged on the unpaid balance.

But the broad general plans indicated above do not by any means include all of the efforts that are made to take

proper care of employees. The work touches all departments and phases of the telephone business in one way or another. Especially is this fact evident in the care that is taken of telephone operators—the young women who answer your telephone with a cheery "Number, please?"

There are 75,000 girl telephone operators in the Bell System today. They are tremendously important factors in the business of furnishing telephone service to the users of more than 9,000,000 Bell telephones, and the various Bell companies appreciate the value of their services. From the time they supplanted the boys at the switchboard, back in the eighties, and took up the profession of telephone operating, they have received every care from their employers.

From the moment an operator enters a central office to begin her daily work until she is relieved and goes to her home, everything possible is done to provide for her comfort and welfare. The exchanges are roomy, well lighted, carefully heated and ventilated. Lockers are provided for hats and wraps. Each girl has her own individual operator's set. While off duty and during rest periods, which come at regular intervals, large, airy retiring rooms, attractively furnished with easy chairs, rockers, couches, and tables, are provided for her use. Books and magazines are at her disposal. The atmosphere of these rooms is restful and homelike.

In addition there are cozy lunch rooms, which, like the retiring rooms in the larger exchanges, are in charge of matrons. Tea, coffee, milk, and sugar are provided by the company, and other supplies are secured for the girls at prices lower than those existing in outside eating places. An effort is made to have the food conform to the principles of modern dietetics.

The chairs used by the girls when at the switchboards are designed with foot rests at just the right height; the height of the switchboard itself is determined by the reach of the average girl's arms, and the operators' sets are as light as possible and made to leave both hands free. Everything on the switchboard is located where it can be manipulated most easily, not only to make the switchboard service as fast as possible, but also to make the work as easy as possible for the girls.

After passing the entrance examinations, which are designed to secure the employment of only capable, intelligent girls who have good sight, hearing, and health, student operators receive a regular course of training that lasts four weeks. During this period they are paid by the company. They are given thorough instruction in how to meet the variety of demands made upon those who operate the switchboards. They practice at special switchboards, and before they are allowed to handle calls from the public they must satisfy their instructors of their ability to do the work properly. On the second and each succeeding anniversary of their engagement they receive anniversary payments of $25, $50, or $100, according to the length of their service. They are given annual vacations of two weeks with pay, and, like all other employees, they are beneficiaries without any expense to themselves under the Benefit Fund Plan of the Bell System companies.

The average citizen who visits one of the New York Telephone Company's offices is sure to be impressed by the family atmosphere that prevails in it. The organization is a big family which is engaged in providing an important service for the public. It takes pride not only in the collective results of its efforts, but in the success of each of its members, and the pull-together, do-our-best spirit that is evident undoubtedly is one of the causes for the superior quality of American telephone service.

SOCIAL HYGIENE VENEREAL DISEASES

Conducted by WILLIAM F. SNOW, M. D.,
General Secretary, The American Social Hygiene Association.

Please address items of news and inquiries regarding Social Hygiene to the editor of this department, 105 West Fortieth street, New York City.

Social Hygiene in the Army During War Time

BY J. H. FOSTER, Assistant Secretary of the American Social Hygiene Association, New York City.

It is generally recognized that the problems of prostitution and venereal disease bear an important relation to the efficiency of military organizations and that it is imperative to deal effectively with these problems as they arise in connection with the military training camps now in existence or soon to be established in this country. To this end, the American Social Hygiene Association is cooperating with governmental agencies along three principal lines of activity:

1. With the Commission on Training Camp Activities recently established by the War Department under the chairmanship of Mr. Raymond B. Fosdick. The functions of this commission which particularly interest social hygiene workers are two-fold: First, it is charged with the responsibility of keeping the Secretary of War informed as to the conditions in training camps and the zones surrounding them, with the idea of safeguarding the army from the moral hazards which have too often been connected with camp life. Secretary Baker is determined that the training camps shall be free from vice and drunkenness so far as it is humanly possible to make them so. Second, the task of the commission is to coordinate the different agencies which are seeking an opportunity for service among the soldiers in the training camps. That is, the commission operates as a clearing house to eliminate the waste and competition of overlapping organizations, at the same time stimulating rational recreational facilities. In carrying out this latter function, the commission is, of course, seeking to promote the utmost cooperation between the camps and the neighboring communities, and to enlist the service of the many recreational agencies already in existence. With this commission, the American Social Hygiene Association is cooperating especially in those parts of its program which relate to prostitution and the venereal diseases.

2. With the medical departments of the army and navy. These departments are faced with the task of providing adequate facilities for the diagnosis of syphilis and gonococcus infections among candidates for enlistment. Provision must also be made for medical, advisory, and treatment facilities from the time of enlistment to arrival at the training camps, and plans must be perfected for organizing the treatment and supervision of all cases of soldiers in the camps who are infected or exposed to infection. In all of these problems there is opportunity for civilian resources to be of material assistance to the medical staff of the War Department.

While it is hoped that the work of the Commission on Training Camp Activities may result in reducing the number of exposures, it is nevertheless imperative that no step be neglected for the efficient handling of these diseases as a medical problem. The association is also interested in promoting cooperation between military and civil authorities for adequate medical supervision for infected persons who are refused enlistment and for infected soldiers who may be discharged from the army.

3. With the United States Public Health Service and other governmental agencies in the control of venereal diseases in cities and communities accessible to military camps. The especial work of the association in this field lies in the education of public opinion to the support of measures for dealing practically with conditions which favor the spread of venereal diseases, in helping to secure an adequate supply of salvarsan, and in encouraging the creation of facilities for the treatment of infected individuals in the civil population.

Dr. Snow, general secretary of this association, who is a member and secretary of the General Medical Board and has been detailed to the Medical Section of the Council of National Defense, is chairman of the subcommittee on venereal disease. The other members of this committee are: Dr. Haven Emerson, Mr. Raymond B. Fosdick, Dr. Edward L. Keyes, Jr., and Dr. Hans Zinsser. In addition to these members who can meet regularly in Washington, there are advisory and consulting members in each geographic area in which military camps are located.

The Council of National Defense, after an exhaustive study of conditions in Europe, has recommended that an effective zone, under military control, be created about all military commands as the most practicable and effective measure for the prevention of venereal diseases. The selective draft law prohibits the sale of intoxicating liquors to men in uniform and gives the Secretary of War practical authority to repress prostitution in the following sections:—

"Sec. 12. That the President of the United States, as Commander in Chief of the Army, is authorized to make such regulations governing the prohibition of alcoholic liquors in or near military camps and to the officers and enlisted men of the army as he may from time to time deem necessary or advisable: *Provided*, That no person, corporation, partnership, or association shall sell, supply, or have in his or its possession any intoxicating or spirituous liquors at any military station, cantonment, camp, fort, post, officers' or enlisted men's club, which is being used at the time for military purposes under this act, but the Secretary of War may make regulations permitting the sale and use of intoxicating liquors for medicinal purposes. It shall be unlawful to sell any intoxicating liquor, including beer, ale, or wine, to any officer or member of the military forces while in uniform, except as herein provided. Any person, corporation, partnership, or association violating the provisions of this section or the regulations made thereunder shall, unless otherwise punishable under the Articles of War, be deemed guilty of a misdemeanor and be punished by a fine of not more than $1,000 or imprisonment for not more than twelve months, or both.

"Sec. 13. That the Secretary of War is hereby authorized, empowered, and directed during the present war to do everything by him deemed necessary to suppress and prevent the keeping or setting up of houses of ill fame, brothels, or bawdy houses within such distance as he may deem needful of any military camp, station, fort, post, cantonment, training, or mobilization place, and any person, corporation, partnership, or association receiving or permitting to be received for immoral purposes any person into any place, structure, or building used for the purpose of lewdness, assignation, or prostitution within such distance of said places as may be designated, or shall permit any such person to remain for immoral purposes in any such place, structure, or building as aforesaid, or who shall violate any order, rule, or regulation issued to carry out the object and purpose of this section shall, unless otherwise punishable under the Articles of War, be deemed guilty of a misdemeanor and be punished by a fine of not more than $1,000, or imprisonment for not more than twelve months, or both."

The Secretary of War has addressed a letter to the governors of all the states, asking their cooperation in the repression of vicious conditions in connection with the training camps, in part as follows:—

"I am very anxious to bring to the attention of the state councils of defense a matter in which they can be of great service to the War Department. In the training camps already established or soon to be established, large bodies of men, selected primarily from the youth of the country, will be gathered together for a period of intensive discipline and training. The greater proportion of this force probably will be made up of young men who have not yet become accustomed to contact with either the saloon or the prostitute and who will be at that plastic and generous period of life when questionable modes of indulgence easily serve as outlets for exuberant physical vitality.

"Our responsibility in this matter is not open to question. We cannot allow these young men, most of whom will have been drafted to service, to be surrounded by a vicious and demoralizing environment, nor can we leave anything undone which will protect them from unhealthy influences and crude forms of temptation. Not only have we an inescapable responsibility in this matter to the families and communities from which these young men are selected, but, from the standpoint of our duty and our determination to create an efficient army, we are bound as a military necessity to do everything in our power to promote the health and conserve the vitality of the men in the training camps. In this respect we can learn from the experience of the European armies, where disabilities due to venereal disease have in some cases been extraordinarily high.

"I am determined that our new training camps, as well as the surrounding zones within an effective radius, shall not be places of temptation and peril. The amendments to the army bill recently passed, a copy of which I inclose herewith (secs. 12 and 13), give the War Department more authority in this matter than we previously possessed. On the other hand, we are not going to be able to obtain the conditions necessary to the health and vitality of our soldiers without the full cooperation of the local authorities in the cities and towns near which our camps are located, or through which our soldiers will be passing in transit to other points.

"Will you give earnest consideration to this matter in your particular state? I am confident that much can be done to arouse the cities and towns to an appreciation of their responsibility for clean conditions; and I would suggest that, through such channels as may present themselves to you, you impress upon these communities their patriotic opportunity in this matter.

"I would further suggest that as an integral part of the war machinery your council make itself responsible for seeing that the laws of your state and of Congress in respect to these matters are strictly enforced. This relates not only to the camps established under Federal authority, both the present officers' training camps and the divisional training camps soon to be opened, but to the more or less temporary mobilization points of the National Guard units. It relates, too, as I have indicated, to the large centers through which soldiers will constantly be passing in transit to other points.

"As I say, the War Department intends to do its full part in those matters, but we expect the cooperation and support of the local communities. If the desired end cannot be otherwise achieved, I propose to move the camps from those neighborhoods in which clean conditions cannot be secured."

The policy in relation to prostitution and venereal disease in connection with military training camps, recommended by the Council of National Defense as the basis for governmental action, is embodied in the following resolutions prepared at a joint meeting of committees from the American Social Hygiene Association, the American Dermatological Association, the Association of Genito-Urinary Surgeons, the American Urological Association, and the American Public Health Association. These resolutions were presented at a public hearing held by the committee on hygiene and sanitation of the General Medical Board of the Council of National Defense, and were adopted for formal presentation to the advisory commission and the council.

WHEREAS, venereal infections are among the most serious and disabling diseases to which the soldier and sailor are liable;

WHEREAS, they constitute a grave menace to the civil population;

THEREFORE, the Committee on Hygiene and Sanitation of the General Medical Board of the Council of National Defense recommends that the General Medical Board transmit to the Council of National Defense for the guidance of the War and Navy departments the following recommendations:—

1. That the departments of war and navy officially recognize that sexual continence is compatible with health and that it is the best prevention of venereal infections.

2. That the departments of war and navy take steps toward the prevention of venereal infections through the exclusion of prostitutes within an effective zone surrounding all places under their control, and by the provision of suitable recreational facilities, the control of the use of alcoholic drinks, and other effective measures.

3. That the said departments adopt a plan for centralized control of venereal infections through special divisions of their medical services.

4. That the said departments consider the plan of organization herewith attached.

WHEREAS, the use of alcoholic beverages is generally recognized as an important factor in the spread of venereal disease in the Army and Navy; and

WHEREAS, these diseases are among the most serious and disabling ones to which soldiers and sailors are liable:

THEREFORE, be it resolved that we endorse the action of the Army and Navy in prohibiting alcoholic beverages within military places in their control and we further recommend that the sale or use of alcoholic beverages be prohibited to soldiers and sailors within an effective zone about such places.

If governmental plans for the repression of these evils are to be favorably carried out, there will be opportunity and need for widespread and active cooperation on the part of persons and organizations in civil life. Just what form of work may best be undertaken by any particular agency cannot be determined until the location of the training camps is known and the powers of the military authorities are definitely fixed. But it is safe to assume that the government will look largely to the civil authorities to repress prostitution, the use of alcohol, and other vicious conditions in the towns to which the soldiers in training have access in their leisure time. In spite of the progress of public opinion in respect to methods of dealing with prostitution, there are still towns where segregated districts are tolerated and military training camps may be located near some such communities. It is also likely that, even in towns where conditions are now satisfactory, vicious forces may become active when the military training camps are established. It is possible that official action may need the stimulation of private initiative to meet such situations.

Aside from removing the opportunities for indulgence in vice, those who desire to be of service in promoting the moral and physical welfare of the troops in training will without doubt have opportunity to help provide wholesome forms of recreation. The Commission on Training Camp Activities, through the Y. M. C. A. and perhaps other agencies, will have charge of such facilities within the camp precincts, but it is not to be expected that the men in training will be continuously confined within military limits. It is easy to foresee a vigorous demand on their part for amusement of one form or another. For the sake both of the men in training and of the civil population, there should be an intelligent and effective organization of the best forces in all of the communities to which the men have access, to see to it that recreational and social activities are adequate, suitable and properly conducted.

"Be strict with yourself, lenient with others; it is not enough to be virtuous. Virtue itself becomes unclean when it is not loving, forgiving, and kind."

A Handy Signal

Visitor—"So this is the deaf and dumb ward! How do you call people to dinner? I suppose you don't ring a bell."

Superintendent—"No. We have a man who walks through the ward wringing his hands."—Boston Evening Transcript.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

The Management of Hospital Trains (Sul funzionamento dei treni ospedale). Dr. P. L. Fiorani. Igiene moderna, 1917, X, No. 2.

The author describes a hospital train of the Italian army on which he served for several months. Though the last of the thirteen cars making up the train is set apart for the isolation of patients with contagious diseases, he thinks there is always danger of infection on such trains unless the strictest hygienic conditions are assured. To prevent infection he makes a number of recommendations for improving the service on these hospital trains.

The Ambulance of the American Hospital of Paris as Seen by a Surgeon. Dr. L. F. Stewart. Pennsylvania Med. Jour., 1917, XX, No. 6.

The American Ambulance Hospital of Paris is a military hospital established by the American Hospital of Paris. The Lycée Pasteur, a school for children, was turned over to the Americans by the French government. The hospital will soon be able to accommodate 600 patients. The hospital is managed by the American Ambulance Committee, which, in addition, maintains about 150 automobile ambulances at the front. The committee also operates a hospital train known as the *Train sanitaire de l' ambulance americaine*. Besides this the Americans have organized a number of auxiliary hospitals to which convalescent patients are evacuated.

The Employment of Women in the Military Hospitals in Place of Soldiers (Le donne negli ospedali militari al posto dei soldati di servizio). Riv. osp., 1917, VII, No. 1.

The minister of war has decided to replace all soldiers employed in the Italian military hospitals as nurses, servants, etc., by women. It is expected that, from the 500 or 600 military establishments, not less than 20,000 soldiers will be made available to be sent to the front. Later on, the men of the regular hospital corps in the hospitals of the interior of Italy will also be replaced by women and sent to the military hospitals at the front. By this change a large number of men will be made available for service at the front. Experience has shown that women are more adapted, more skillful and more efficient in the service which is now assigned to them.

The First Climatic Military Institute of the Red Cross Opened at Bergeggi (Il primo istituto climatico militare della Croce Rossa inaugurato a Bereggi). Attualita med., 1917, VI, No. 1.

This sanatorium was established for reconvalescent officers of the Italian army. It is beautifully situated between the mountains and the sea, equidistant from Genoa and Savona. It consists of three large four-story build-

ings, which are connected by two intervening structures. The building on the left contains the offices and dwelling of the administrative personnel. In the central building are the chapel, the pharmacy, an operating room, an x-ray room, and various laboratories. The building on the right contains rooms for thirty patients. A special feature are the large covered verandas which extend along the whole southern front. Each room is provided with such a veranda and the bed of each patient can be rolled out in the open air.

Field Hospital Presented to the Russian Army by France. Paris correspondent. Jour. Am. Med. Assn., 1917, LXVIII, No. 23.

A field hospital with sanitary equipment on an entirely new plan has been given by France to the Russian army as the outcome of a subscription taken up throughout France and the colonies. It consists of fifty-two vehicles, of which twenty are for the transportation of the wounded and twenty-three are trucks for the transportation of material equipment. It comprises likewise a receiving station, a waiting room for the wounded, an examining room, a roentgen-ray laboratory, and an operating room. The instruments were manufactured in the shops of the military health service. The personnel comprises 120 nurses, 85 chauffeurs, and 23 medical officers, among whom are physicians and pharmacists and administrative officers.

The Neuropathological Division for Soldiers of the Clinic for Nervous and Mental Diseases of the University of Catania (Reparto neuropatologico militarizzato della Clinica delle malattie nervose e mentali della R. Universitá di Catania). Dr. D'Abundo. Riv. ital. di neuropat., 1917, X, No. 1.

From the beginning of the war a large number of soldiers affected with nervous diseases were sent to the clinic of the University of Catania. To the two wards which the clinic had at the beginning, three more had to be added. In many cases of nervous disturbances a surgical operation is indicated. As most of the patients refuse to submit to an operation, the author says, it should be made obligatory. The service in the neuropathological division is very hard. Functional nervous disturbances are very frequent and varying and an exact study is necessary to establish in each case the real clinical form by eliminating the exaggerations which are nourished and maintained by autosuggestive psychological factors.

Tuberculosis in the War. N. Sforza, M. D. Riv. osp., 1917, VI, No. 23.

Tuberculosis is as frequent in the Italian army as it is in the other European armies. The author urges the erection of a sanatorium for the care and treatment of the men who have contracted tuberculosis in the defense of their country. But he advises against the construction of expenses buildings as has been the custom in Italy and in favor of the example of the Americans, who construct for this purpose only simple, economical frame buildings. Fresh air, good food, rest and light work, and a place of shelter are all that is needed. The Americans establish their sanatoriums not too near the cities, because the ground would be too costly, and not so far that the services are interfered with. While these structures are not classical models of architecture, they serve their purpose in a most excellent manner. These American sanatoriums are usually only large one-story pavilions with a spacious veranda and one or two parlors, or they are barracks of the hangar type ranged around a central building intended for the services. If the patients increase, it is necessary only to add a new pavilion. The cost of such a sanatorium is only $100 to $350 per bed. This is the type of sanatorium which should be introduced in Italy, not only for the care of tuberculous soldiers, but also for the civilian population.

The Surgeon's Responsibility to the Economics of the Hospital. E. Marvel, M. D. Am. Jour. Obstet., N. Y., 1917, LXXV, No. 3.

There is much waste and general economic inefficiency in the management of hospitals. Much of the responsibility for the success of a hospital and for a large portion of the dissipation of its resources rests upon the surgeon. Complaints that the medical staff has no voice in the direction of the hospital are not well founded. The managing board are receptive, in fact, seek the counsel of the progressive surgeon. Many surgeons waste the time of the nurses, interns, and orderlies by not being regular in their visits and punctual in the appointments for operations. There is also much waste of supplies and extravagant use of unnecessary or unduly expensive articles, when cheaper ones would do just as well or better. In the community service of a hospital it frequently happens that a patient or a member of his family returns to the hospital with a disease for which he had been treated before at the hospital and which could have been easily prevented if he had been given proper instruction the first time how to take care of himself and how to prevent the disease in his family. In this manner the hospital could do valuable educational work in hygiene.

In hospital construction the members of the medical staff play an important part. Extra buildings for special departments should not be insisted on when afterwards little use is made of them. Thus of sixteen hospitals which had provided for a morgue with equipment for autopsies only four had an autopsy performed during the period of a year, and only fourteen autopsies had in all been performed at these sixteen hospitals. In another instance a hydrotherapy department was established at the demand of the medical staff at an expense of $20,000, yet comparatively very little use was afterward made of it.

The Insane in a County Poor Farm. Thomas W. Salmon, M. D. Mental Hygiene, 1917, I, No. 1.

Salmon, who is medical director of the National Committee for Mental Hygiene, describes the poor farm of a prosperous rural county in an unnamed state in the cotton belt. The provision for paupers, paralytics, feeble-minded persons, and epileptics is fairly comfortable, though of course a county poor farm is an unsuitable place for the latter two classes. The forty-odd insane, however, are confined in unsunned iron cages in an old brick building, "abandoned to filth and unbelievable misery." They are not even allowed the liberty of the ward; they have no care except that of a totally untrained attendant who used to be a trolley-car conductor. His predecessor is now serving a term in the state penitentiary for an attack upon a little girl inmate of the poor farm. All but three or four remain in their cages all day; at night all are locked in without attendance.

Origin of the Psychopathic Hospital. G. H. Hill, M. D. Jour. Iowa State Med. Soc., Des Moines, 1917, VII, No. 2.

Formerly hospitals for the insane were intended chiefly for the custodial care of the patients. The Danvers State Hospital was the first institution in this country to establish wards for the careful special treatment of acute cases. Soon afterward special pavilions for the treatment of mental cases were established in a number of general hos-

pitals. In Massachusetts a psychopathic department was organized in connection with the Boston State Hospital under the able direction of Dr. Southard. The first psychopathic hospital in this country was the Sheppard and Enoch Pratt Hospital near Baltimore, founded in 1891. Through the efforts of Dr. Welch a psychopathic clinic was established at the Johns Hopkins Hospital. The building, constructed on the most modern principles and finely equipped, was opened in 1913. In 1906 the state of Michigan founded a State Psychopathic Hospital at the University of Michigan, and appointed Dr. Barrett as its director. It is an institution for the treatment of mental conditions bordering on insanity and for carrying on research work in the phenomena and pathology of mental diseases. The hospital has lately been enlarged to accommodate 100 patients. It has a well-equipped laboratory for the investigation of diseases of the nervous system and does laboratory work for all the state hospitals of Michigan. The State Psychopathic Hospital has a psychiatric clinic for the medical school of the University of Michigan. About half of the patients are voluntary.

The Community Value of the Out-Patient Department of the Hospital for the Insane. John B. MacDonald, M. D. Mental Hygiene, 1917, I, No. 2.

Dr. MacDonald, who is superintendent of Danvers Hospital, Hathorne, Mass., describes the work of out-patient clinics in hospitals for the insane in Massachusetts. The Massachusetts School for Feeble-Minded at Waverley had for many years held a clinic at its hospital, and the psychopathic department at the Boston State Hospital and the Norfolk State Hospital for Inebriates had for shorter periods been holding out-patient clinics. The first general attempt to organize out-patient clinics in hospitals throughout Massachusetts was made in 1914. In accordance with a decision of the State Board of Insanity, clinics were opened by the following spring in practically all parts of the state. The scope of the activity of the clinics and the social service departments has greatly widened, and the value of the service, both to the hospital and to the public, has been definitely settled. The services of the department make it possible to discharge patients earlier than would otherwise be possible, thus reducing the burden of support resting on the state. After-care of discharged patients reduces the possibility of relapse and readmission. Dr. MacDonald speaks of one institution in which for almost two years there has rarely been an instance of readmission of an alcoholic patient whom it was possible to keep under the supervision of the out-patient service. He says, "The dread of the hospital, the mystery which bred distrust, the undercurrent of suspicion which hindered and hampered the work of the greatest of our public charities, are disappearing. Our aims, methods, problems and difficulties are better understood. Through service we have gained an unprejudiced trial and fair judgment in the court of public opinion. The community gains immeasurably through the coordination and higher efficiency made possible by harmony and mutual understanding between the public and its servants."

Industrial Occupation and Recreation Among the Insane. B. F. Frazer, M. D. Jour. Kansas Med. Soc., 1917, XVII, No. 2.

Normal employment is one of the best means of treatment of the insane, both those in whom a pressure of activity tends, unless otherwise directed, to be expended in pacing the floor or making noise and disturbance, and those who, unless aroused by positive direction, tend to brooding passivity. At the Osawatomie State Hospital patients are employed for their own good and also as a means of lightening the expenses of the institution. Many of the women are occupied in the laundry and in helping in the work about the wards. One hundred women in an arts class are instructed in needlework, basket-making, rug-weaving, etc., as well as in the various handicrafts in which normal women find recreation. Many of the men are employed for about six hours a day on the farm and in the gardens. This is work to which many of them were accustomed before commitment. Some care for sheep and dairy stock. All apparently enjoy their work. Some of the patients with slight mental deterioration are employed in the engine-room and boiler-house. Others, chiefly those who were painters and carpenters before commitment, do the greater portion of the rougher painting and carpentry. More deteriorated patients are used in the rock-quarry and in the care of the lawn and grounds. A number of men are not assigned to any specific tasks, but are sent out in squads, each squad in charge of an attendant, to do any work that may be required. In the industrial department trades, including the making of brooms, shoes, harness, tinware, and mattresses, are taught and practiced. Frazer believes that this work is of benefit to the patient as well as a saving to the institution.

A Modern Hospital for the Insane From the Standpoint of Medical Service. H. D. Singer, M. D., M. R. C. P. Ill. Med. Jour., 1917, XXXI, No. 5.

Dr. Singer says that one direction in which research is especially needed in connection with the hospital for the insane is the employment and the occupation of patients. The economic side is important, but of far greater importance is employment as a means of care for the patient. Occupational diagnosis will come to occupy an increasingly large part in our social system at large, both for efficiency and for economy. Proper equipment and qualified investigators are necessary. Research has only begun. Well-equipped and diversified industrial departments with facilities for education and observational records are called for.

From the point of view of the study of the patient the hospital must provide for investigation of (1) the bodily organs, (2) the personality, the biologic psychology, or habits of adjustment, (3) the environment. This implies the use of all known means of physical diagnosis, observation of the patient's reactions to conditions subject to control, and information as to methods of adjustment which were habitual to the patient in his life prior to admission to the hospital. From the point of view of its educational functions, the hospital owes a duty to the profession at large, to the physicians on its staff, and to the general public. The problems connected with the special hospital and the close and direct relation to society and cooperation of the public in its work is shown.

The First Spanish Institute for the Protection of Infants, and Its Program (Il primo istituto nipio igienico spagnuolo ed il programma dell' istituto di nipiologia). Dr. E. Cacace. Nipiologia, 1916, II, No. 4.

Through the initiative of Dr. Martinez Vargas of Barcelona was opened, last September, the first Spanish institute for the protection and care of infants. Its purpose is to establish, wherever needed, consultation offices for nurslings, stations for furnishing milk for babies of needy mothers, asylums for poor mothers, school for infantile hygiene and puericulture, popular schools for the instruction in motherhood, and scientific laboratories for the examination of milk and for the biological and hygienic study of babyhood.

BOOK REVIEWS

Vade-Mecum for the Use of Officers and Interpreters in the Present Campaign. French and English Technical and Military Terms by Eugène Plumon, Officer Interprète Stagiaire Près le Corps Expéditionnaire Britannique, Avocat a la Cour d'Appel de Paris, Docteur en Droit de l'Université de Heidelberg, Docteur en Droit. Brentano's, New York and Washington.

This work is intended for those who have already some knowledge of the French language. One may speak French fluently, when dealing with ordinary subjects, and yet find oneself at a loss among the technical and semi-slang expressions of military language, many of which have, indeed, been but recently evolved under the pressure of necessity. Nevertheless, nowhere is precision more necessity than in the work of the military interpreter.

So far as we are able to judge, the work of Dr. Plumon has been well done. The order of subjects is the rational or logical order so dear to the French mind, though it renders a word or phrase more difficult to find than with our, doubtless, more barbaric simple alphabet method.

The table of equivalence of ranks in the respective medical services of the French and the British Army is misleading. The author has given the officers of the R. A. M. C. the obsolete titles of surgeon-lieutenant, surgeon-captain and so on, instead of the substantive ranks now held by them.

We are taking the liberty of selecting for reproduction some of the words and expressions most useful to the officers and members of the medical corps, with some modifications and corrections in translation:

We give below the words in connection with sanitary units:

Ambulance automobile, *f.*	Ambulance car.
—— chirurgicale automobile, *f.*	Surgical ambulance car (*motor surgery*).
—— divisionnaire, *f.*	Advanced dressing station, field ambulance.
Billet d'entrée, *m.*	Admission order.
—— de sortie, *m.*	Discharge order.
—— d'urgence, *m.*	Emergency order.
Bon d'aliments, *m.*	Order for food.
—— de medicaments, *m.*	Order for drugs.
Cahier de visite	Note-book for medical examinations.
Certificat médical, *m.*	Medical certificate.
—— de visite, *m.*	Medical examination certificate.
Changement d'armes, *m.*	Transfer from one branch of the service to another.
Congé de convalescence, *m.*	Sick leave.
Dépôt de convalescents et d'éclopés, *m.*	Convalescent and lame depot.
Dépôt de régiment, *m.*	Regimental depot.
Feuille d'évacuation, *f.*	Evacuation order.
—— d'observation, *f.*	Clinical report sheet.
—— de renseignements, *f.*	Memorandum of information.
—— de temperature, *f.*	Temperature chart.
Fiche blanche (*blessé intransportable*)	Non-transportable patient (*white ticket*).
Fiche rouge, *f* (*blessé evacuable*)	Transportable patient (*red ticket*).
Gare d'évacuation, *f.*	Clearing station.
—— de repartition des malades et des blessés, *f.*	Central regulating station.
—— de triage, *f.*	Sorting station.
—— régulatrice, *f.*	Regulating station.
Groupe de brancardiers divisionnaries, *m.*	Divisional stretcher bearers' parties.
Guérison, *f.*	Recovery.
Hôpital de contagieux, *m.*	Hospital for contagious cases or infectious diseases.
—— d'évacuation, *m.*	Clearing hospital.
—— auxiliaire, *m.*	Auxiliary hospital.
Hôpitaux de l'interieur, *m. pl.*	Base hospitals.
Hôpitaux militaires, *m. pl.*	Military hospitals, or army hospitals, general hospitals, stationary hospitals (*smaller*).
Hôpital thermal, *m.*	Spa hospital.
—— temporaire	Temporary hospital.
Infirmerie, *f.*	Infirmary.
Infirmier	Hospital orderly, male nurse.
Laboratoire d'armée, *m.*	Army laboratory.
Nid ou refuge de blessés, *m.*	First aid station (nid-nest).
Pension, *f.*	Pension.
Pension de réforme, *f.*	Reduced pay (*proportional allowance granted to men rendered unfit for service by wounds or sickness contracted on duty*).
Poste de secours, *m.*	Dressing station.
Réforme	Invalidation.
—— No. 1, *f.*	—— with full allowance.
—— gratification	—— with a temporary allowance.
—— No. 2, *f.*	—— without an allowance.
—— temporaire, *f.*	Temporary invalidation.
—— definitive, *f.*	Permanent invalidation.
Section automobile de radiographie, *f.*	X-ray motor section.
Service auxiliaire, *m.*	Auxiliary service.
Train sanitaire, *m.*	Hospital train (*sanitary train*).

WOUND DRESSING—AMBULANCE AND FIRST AID

Acide acétique cristallisable	Glacial acetic acid.
Acide, phénique	Carbolic acid.
Affaissement, *m.*	Collapse.
Ampoule, *f* (*corporelle*)	Blister.
Ampoule, *f* (*vase*)	Ampule.
Asphyxie, *f.*	Asphyxia.
Attelle, *f.*	Splint.
Balafre, *f.*	Gash, slash, or scar of same.
Bandage, *m.*	Bandage, dressing band.
—— de forme spéciale	Special bandage.
—— frondes	Many-tailed.
—— carré	Square.
—— circulaire, *m.*	Circular bandage.
—— circulaire oblique, *m.*	Oblique bandage.
—— renversé, *m.*	Reverse spiral bandage.
—— spiral ou roule, *m.*	Simple spiral bandage.
—— en T simple	T-shaped bandage.
—— en T double	Double T bandage.
—— triangulaire, *m.*	Triangular bandage.
Bande, *f.*	Roller bandage.
—— de pansement antiseptique, *f.*	Antiseptic roll bandage.
Blessure, *f.*	Wound.
Brancard, *m.*	Stretcher.
Brancardier, *m.*	Stretcher bearer.
Brouette porte-brancard, *f.*	—— on carrier (brouette-wheelbarrow).
Bruler	To burn, to sear.
Caillot de sang, *m.*	Clot.
Camisole de force, *f.*	Straight waistcoat.
Charpie, *f.*	Lint.
Chef initial, *m* (*bandage*)	Initial or free end (*bandage*).
Chef terminal, *m* (*bandage*)	Terminal end (*bandage*).
Choc, *m.*	Shock.
Cicatrice, *f.*	Scar.
Coagulation du sang, *f.*	Coagulation of the blood.
Contusion	Bruise.
Coton antiseptique, *m.*	Antiseptic wool.
Croute, *f.*	Scab.
Désinfectant, *m.*	Disinfectant, disinfecting.
Diachylon, *m.*	Diachylum.
Débridage de la plaie, *m.*	Clipping the wound.
Douleur, *f.*	Pain, aching.
Ecchymose, *f.*	Ecchymosis.
Echarpe, *f.*	Sling.
Echauder	To scald.
Entorse, *f*; foulure, *f.*	Twist, sprain.
Evanouissement, *m.*	Fainting, swooning.
Fièvre, *f.*	Fever.
Fracture, *f.*	Fracture, break.
—— ouverte	Compound fracture.
Gangrène, *f.*	Gangrene.
Garrot	Temporary tourniquet.
Hémorragie externe, *f.*	External hemorrhage.
—— interne, *f.*	Internal hemorrhage.
—— veineuse, artérielle, *f.*	Veinous, arterial hemorrhage.
Immobiliser	To immobilise.
Insensibilité, *f.*	Insensibility.
Leucoplaste, *m.*	Sticking plaster.
Luxation, *f.*	Spraining.
Mal, *m*; maladie, *f.*	Disease, illness.
Nettoyer, purifier une blessure	To cleanse a wound.
Ouverture de la plaie, *f.*	Opening of the wound.
Planser une blessure.	To dress a wound.
Plaie contuse, *f.*	Contused or bruised wound.
—— empoisonnée, *f.*	Poisoned wound.
—— en estaillade, *f.*	Incised or clean-cut wound.
—— en seton, *f.*	Perting wound.
—— par déchirure, *f.*	Lacerated wound.
—— pénétrante, *f.*	Punctured, or stab wound.
—— septique, *f.*	Septic sore.
—— superficielle, *f.*	Superficial wound.
Plein, *m* (*bandage*)	Body (*bandage*).
Poudre boriquée, *f.*	Boracic powder.
Saignement, *m.*	Bleeding.
Seringue hypodermique	Hypodermic syringe.
Sérum antitétanique	Antitetanic serum.
Spica, *m.*	Spica.
Sublimé, *m.*	Sublimate.
Syncope, *f.*	Syncope.
Teinture d'iode, *f.*	Tincture of iodine.
Tourniquet, *m.*	Tourniquet.
Vaseline boriquée, *f.*	Boric vaseline.
Vomissement, *m.*	Vomiting.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

A New Splint for Treating Fractures of the Lower Extremities

This new traction splint, as illustrated under Fig. 1, has been devised by Dr. H. W. Vickers, Little Falls, N. Y., after an extensive experience in one of the European war hospitals. The splint consists of the following parts: the ring, the slide pieces, end piece and cross bar. The ring is made of two half-inch iron semicircles. Both ends are threaded (right and left) and fitted into T unions, the other end of

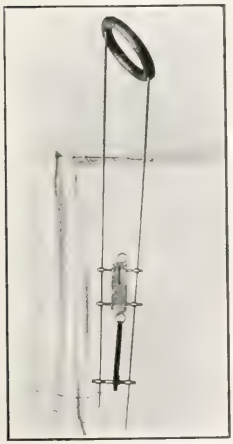


Fig. 1. Traction splint for treating fractures of the extremities.

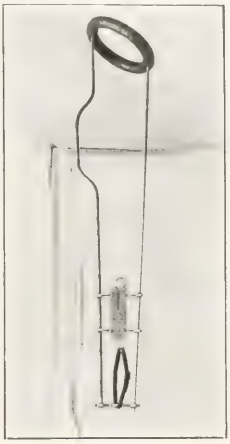


Fig. 2. A modification, for use in fractures with injuries to the soft tissues, of the splint shown in Fig. 1.

the union taking the side pieces. The ring is padded and covered with leather.

The side pieces are made of half-inch round iron, about 60 inches in length, which is about 12 to 15 inches longer than the injured limb. One end is threaded and screwed into the union in the ring, thus can be easily removed. On the other end is fitted a detachable and adjustable cross bar with set screws to retain the desired angle formed by the rings and side pieces.

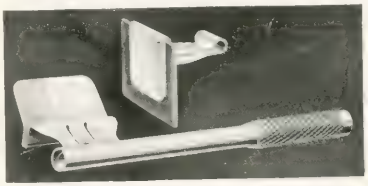
The end piece contains an ordinary spring scale, arranged through movable blocks to slide on the side pieces, thereby adjusting itself to limbs of different sizes and lengths. To the hook end of the scale is fastened a so-called spreader, as in a Buck's extension. The end piece is held at desired points by a strap passing over the end adjusting cross bar. A change in this length will alter the amount of traction on the limb, as expressed in pounds read on the scales.

The advantages to be derived from this splint, as pointed out by Dr. Vickers, are that the traction and counter traction can be secured combined and expressed in pounds, instantly changed and adjustable, and beyond the power of the patient to change. The surgeon may leave his patient, knowing that the latter will not slide down in bed and rest his heels against the footboard of the bed. The splint can be readily adjusted to a thigh of any size without tools and without giving an anesthetic. Elevation and abduction are available and easily changed at any time and as often as desired, thus greatly facilitating dressings and nursing. When treating fractures with injury to soft tissues, one side piece may be replaced by a special one having in it an offset opposite the wound, as shown under Fig. 2.

The Dorr Dental X-Ray Film Holder

Here is something new and invaluable to the x-ray man—a film holder which will insure against the accidental movement of the film in the mouth while making an exposure. Its use prevents undue exposure of one's own hands and does away with the use of the hand or finger of the patient and consequent slipping of the film.

It is always hard to get good pictures of lower second and third molars, just because the soft tissues insist upon forcing the film out of position. In this connection it is also pointed out that, when the mouth is opened sufficiently to admit of a finger to hold the film in position for lower molars, the tissues are tense and in some mouths it is next to impossible to place the film low enough to catch the



Dorr dental x-ray film holder.

ends of the roots; while, when the teeth are closed on the flange of the holder, the tissues in the floor of the mouth immediately relax, permitting the film to be depressed much lower than when the mouth is open.

A dental film *per se* is a very unpretentious-looking little thing, yet the most elaborate x-ray machine is of almost no value from a dental point of view without the use of the film. And, in proportion as the film is held in position and movable, so is the picture good or bad.

The holders come in sets of two, an upper and a lower, including handle.

A New Hospital Window

The fact that for many years past innumerable designs for hospital windows have been offered to architects and hospital boards is a fair indication that the problem of the hospital window has not yet been solved.

An exceptionally good window, and one that looks as though it was to go a long way toward the settlement of this perplexing problem is made by the Ideal Steel Casement Window Co., Cincinnati. Mr. F. P. Anderson, the designer, has been studying this problem for a number of

years and our attention has been called to this window by hospital superintendents and medical staff members. That is the reason why we are illustrating it and calling the attention of hospital people to it.

The window hardly needs detailed description; the illustration shows precisely what it is. The upper sashes are operated synchronously and the lower sashes individually. It will be seen that almost any amount of air desired can be brought into the room, even to the full extent of the window area. In other words, when the sash is opened on the horizontal it is as though there were no window there. The lower sashes can be opened to take in air and

the upper sashes arranged so that the air will pass out, creating a current in the room itself which will serve to thoroughly ventilate.

The sections can be laid open for cleaning from the inside, and this alone will prove a great economy, since window washers would be able to wash perhaps two or three times as many of these windows per day as ordinary or other new kinds.

One of the best features about this metal steel casement window is its inexpensiveness, being well within reach of any hospital that can afford materials of medium price and that insists upon materials of the highest quality.

Dr. Henry Pinckney Frost, superintendent of the Boston State Hospital, Boston, Mass., died at the Massachusetts General Hospital, Boston, May 24, after an illness of four weeks. Dr. Frost was a native of Charleston, S. C. He was graduated from the medical school of the University of Maryland in 1889. His first work was at the hospital on Ward's Island, New York. From there he went to Willard, N. Y., where he was assistant superintendent at the Willard State Hospital. Later he held a similar position at the Buffalo State Hospital, where he remained for 13 years. He had been connected with the Boston hospital since 1909. Dr. Frost was a member of the American Medical Association, the American Neurological Association, American Society of Psychiatry, and other professional organizations.

QUERIES AND ANSWERS

Wants a Simple, Effective Switch

To the Editor of THE MODERN HOSPITAL:

I am in trouble regarding the lighting system in my new hospital, which I am just completing. The wires are all in and the system works perfectly. The only trouble, which is a rather serious one, is that I have arranged the system to use a double-pole (four-wire) chain pull pendant switch. The plan is to have the system so arranged that the patient could pull the cord or chain and turn on the signal lights.

I have been unable so far to get a switch in which the chain could be easily pulled from an angle. We have tried a number of switches and all of them have some objection. For instance, in one the chain must be pulled in a direct line; in another the switch is large, obtrusive and objectionable.

Would it be possible for you, through some of your departments, to help me out in this matter? To put it in a few words, I have a signal system that works beautifully with the exception of the switch, which should be plain, simple in design, unobtrusive in appearance, and allow the chain to be pulled in almost any direction.

I have come to rely in a measure on THE MODERN HOSPITAL for advice, and feel that the knowledge that I have already gained from you and your journal has been of special service to me. NORTH CAROLINA.

Reply by Mr. H. E. Murphy, of the St. Louis Brass Manufacturing Company, of St. Louis:

We would recommend the use of a switch similar to the Perkins No. 2396 or No. 2314, double pole. Same switch may be had in any number of points up to four, and up to three-circuit electrolier. This switch is operated by a linen cord, which is brought out from the switch in such manner that it may be operated from practically any angle below the switch. The switch is slightly less than 3 inches in diameter, nickel-plated case, and is mounted on a porcelain base, and we do not believe you would find its use objectionable from the point of view of unsightliness.

Colored Pupil Nurses

To the Editor of THE MODERN HOSPITAL:

Can you give us the names of any hospitals in the north central states that accept colored women in training for nurses? If so, will you please send us their names? We will appreciate it very much. AN OHIO HOSPITAL.

We have no complete list of hospitals accepting colored women in the training school, but here is a list of four: Provident Hospital, Chicago, Ill.; Lincoln Hospital, E. 141st St., New York; Kansas City General Hospital, Kansas City, Mo.; and the Freedmen's Hospital, Washington, D. C.

If there are any other hospitals that accept colored women in training, whose superintendents happen to glance at this note, we shall be very glad to have them send in the names.

Miss Martha Stoakley is filling the vacancy at the Hammond City Hospital, Geneseo, Ill., caused by the resignation of Miss Frances Smith, the superintendent.

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. IX *August, 1917* No. 2

THE ROCKEFELLER INSTITUTE WAR DEMONSTRATION HOSPITAL

Interesting and Valuable Demonstration of a Unit Portable Military Hospital—Double Walls Demanded for Modern War Hospitals—Special Features of Superiority

By CHARLES BUTLER, of Butler & Rodman, Architects, New York

IN announcing the intention of the Rockefeller Institute to erect on its grounds at Sixty-sixth Street and Avenue A, New York, a war demonstration hospital, where the Carrel-Dakin method of treating infected wounds could be practiced and the surgical methods worked out and successfully applied at the military hospital at Compiegne, France, by Dr. Alexis Carrel and Dr. H. D. Dakin could be demonstrated, Dr. Simon Flexner stated that the object of the enterprise was three-fold:

1. To make available to the patients this improved method of treatment.

2. To demonstrate and teach to American surgeons who may be enrolled for military service measures for the treatment of infected wounds, especially by the Carrel-Dakin method.

3. To test the feasibility of a unit portable military hospital designed by Mr. Charles Butler, of New York, who, working under the French War Department, has made a thorough study of the military units which have been developed for use in France and England.

Pursuant to the purpose indicated in the last paragraph, the hospital has been designed exactly as base hospitals are being designed today in France, the only exceptions being that, in view of the existence at the Rockefeller Institute of a complete power plant, it was decided to take steam and electricity from this rather than build an independent plant, and that in the laboratory building, which is of necessity very considerably developed, because of the special purpose of the hospital, we have used city gas instead of depending on lamps as must usually be done in a base hospital.

The plan of the hospital calls for only two wards, each containing twenty-four beds in the open ward, with the possibility of increase to thirty without too great crowding, one bed in a quiet room for each ward, and four beds in a small isolation pavilion, where cases which develop contagious disease after admission may be treated. In a hospital of this small capacity, at most sixty-six beds, a steam kitchen, laundry, etc., would not ordinarily be installed, but in view of the special object of this undertaking these have been included, the capacity being in each case reduced to the minimum. It is interesting to note in this connection that the French army medical authorities consider that steam laundries and kitchens are economical for any number of beds over 300. As the base hospital of today tends towards a capacity of 1,000 beds rather than 500, it may safely be assumed that it will always need high-pressure and low-pressure steam and electricity from its own existing plants.

The problem of water supply and sewage disposal, always a vital one in hospital work, is of course simplified by the location in the midst of the city. In a base hospital, if no city system is available, a Waring or similar disposal system is to be recommended, and many are being installed on the front.

The site available for the hospital was an L-shaped lot, the vertical leg 460 feet long and 170 feet wide, running north and south along Avenue A, and the horizontal, 60 feet wide by 320 feet long, running east along Sixty-fourth Street.

The main entrance to the hospital, on Avenue A, just above Sixty-fourth Street, leads into the ambulance court. Immediately on the left is the visitors' entrance to the administration building,

Fig. 1. General view of the Rockefeller Institute Base Hospital, East Sixty-fourth street and Avenue A, New York.

1. Administration.
2. Reception and discharge.
3. Operating.
4. Laboratory and pharmacy.
5. Ward.
6. Ward.
7. Isolation.
8. Recreation.
9. Mess.
10. Kitchen.
11. Laundry.
12. Stores.
13. Orderlies.
14. Nurses.

which runs north along Avenue A and is connected at its north end to the laboratory building, which also runs north and south. East of the administration building, forming the north side of the court, is the reception and discharge building, in front of which the ambulances draw up to discharge their loads of wounded. On the south side of the court along Sixty-fourth Street is the orderlies' barracks, and east of this, in the L, are the nurses' building running east along Sixty-fourth Street, and the maids' building running north and south on the flat roof on one of the institute buildings.

The east side of the ambulance court is closed by the isolation building. To the north of the reception building and parallel to it, connected to it by a closed corridor, is the operating building. This closed corridor runs west to the administration building and east to the main north-and-south corridor, which is closed north from this point to where it turns west to give access to the ward buildings. The southern part of this corridor, which leads to the isolation building and thence to the nurses' and orderlies' quarters, is open at the sides, and the same is true of the northern portion leading to kitchen, laundry, and stores building, closed corridors being provided only where patients have to pass from one building to another.

The two wards are thus placed between the east corridor and the laboratory building, connected to the transverse corridor at their north or service ends and free at their south ends.

To the north of the transverse corridor and looking out on the service court are the mess hall for nurses, orderlies, and maids, and the recreation building for convalescent patients. On the east side of this court is the kitchen and on the north the laundry, while the stores building occupies the northern portion of the west side, balancing the recreation building, the service entrance from Avenue A being between those two buildings. The grouping of kitchen and laundry in close proximity to the mess hall and ward buildings reduces to the minimum the labor required for the constant transport of food and clean and soiled linen. The frequency of this transport as contrasted with the infrequent trips of patients between the reception and operating buildings and the wards was the determining factor in this arrangement.

In all war hospitals, ease of communication between buildings is an essential, and all transport must be by wheeled vehicles, food cars, stretchers, soiled linen cars, etc., for every war hospital will always be short-handed, and the difficulty of oper-

ating must be reduced to the minimum; hence the uniting of all buildings by slatted walks and the elimination of steps, differences of grades being taken up by inclines.

The ward buildings should be well separated from the quarters reserved for nurses, maids, and orderlies, so that when the latter are off duty they

Fig. 2. Ward in the Rockefeller Institute Base Hospital.

may be able to make a reasonable amount of noise without disturbing the patients.

In the plan of this hospital we should have preferred for this reason to place the isolation building rather further from the orderlies' quarters if it had been possible.

All of the general statements in regard to the grouping of buildings would apply equally well to a field hospital, and the walkways, even if it is impracticable to cover them, are an absolute necessity in the sea of mud in which one lives at the front.

The details of the various buildings are about as follows:

The administration building contains the general waiting room for visitors, with the telephone exchange, a coat and toilet room for visitors, and offices for clerks, executive officer, superintendent of nurses, surgeon on duty and chief surgeon. Adjoining this the laboratory building contains a demonstration and lecture room, record officer's room, coat room and storage, the pharmacy with its waiting room for orderlies, and the chemical and bacteriological laboratories. In addition to the gas already mentioned, the laboratories are supplied with water and with electricity for both light and power throughout.

The receiving and discharging pavilion is in its present development a product of the war, for all wounded must be cleaned before being admitted to the wards, and it has been found convenient to group with the admitting service the storage of patients' effects and the discharging service.

The receiving room into which the ambulances discharge is in the center, with the washing room adjacent, where the men's pedigrees are taken and they are undressed, washed and put into hospital clothes, whence they are wheeled to the wards on stretchers. The soiled clothing is transported in bags on wheeled frames to the laundry building for disinfection and washing and returned to the storage room at the right end of the receiving building. The discharged patient returns to this building, where his records have been kept, secures his valuables and clothing, dresses in the small room adjoining the office, turns back his hospital clothes, and leaves the institution.

Fig. 3. Kitchen in Rockefeller Institute Base Hospital.

The surgeon on duty has in this building a small office where he keeps first-aid supplies, in case his intervention is needed to replace a dress-

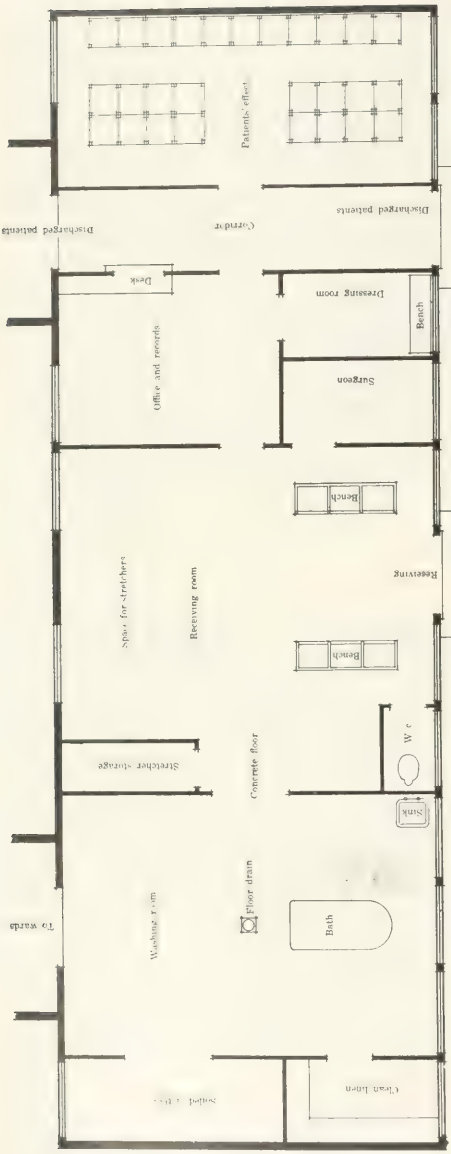


Fig. 4 (No. 2 in general view). Reception pavilion of the Rockefeller Institute Base Hospital. All partitions run to the height of the wall plate. There are concrete floors in the receiving room and washing room and rooms for clean linen and soiled clothes.

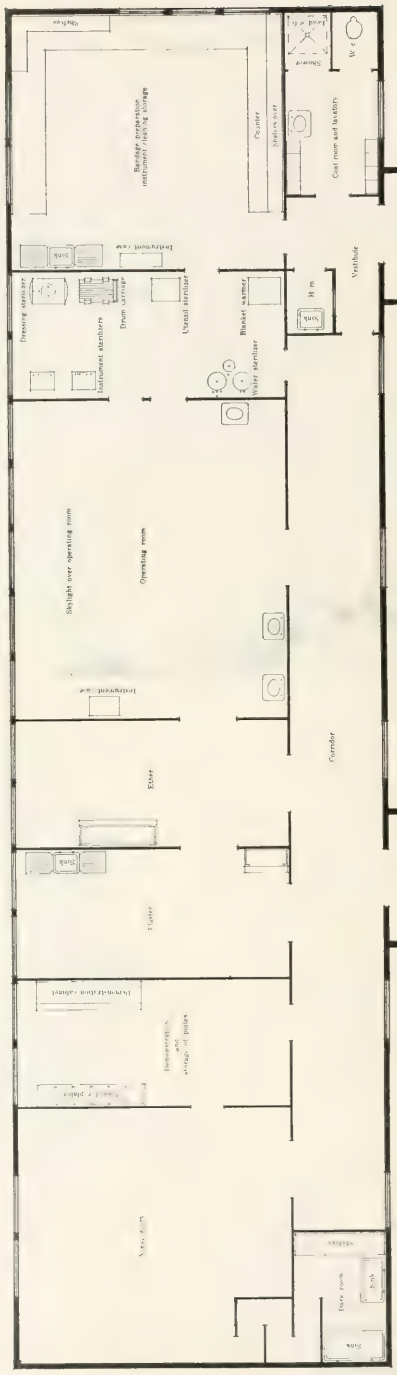


Fig. 5 (No. 3 in general view). Operating pavilion of the Rockefeller Institute Base Hospital. All partitions in this pavilion are doubled and carried to the roof. The shower-bath compartment is lined with galvanized iron and has a lead-lined safe.

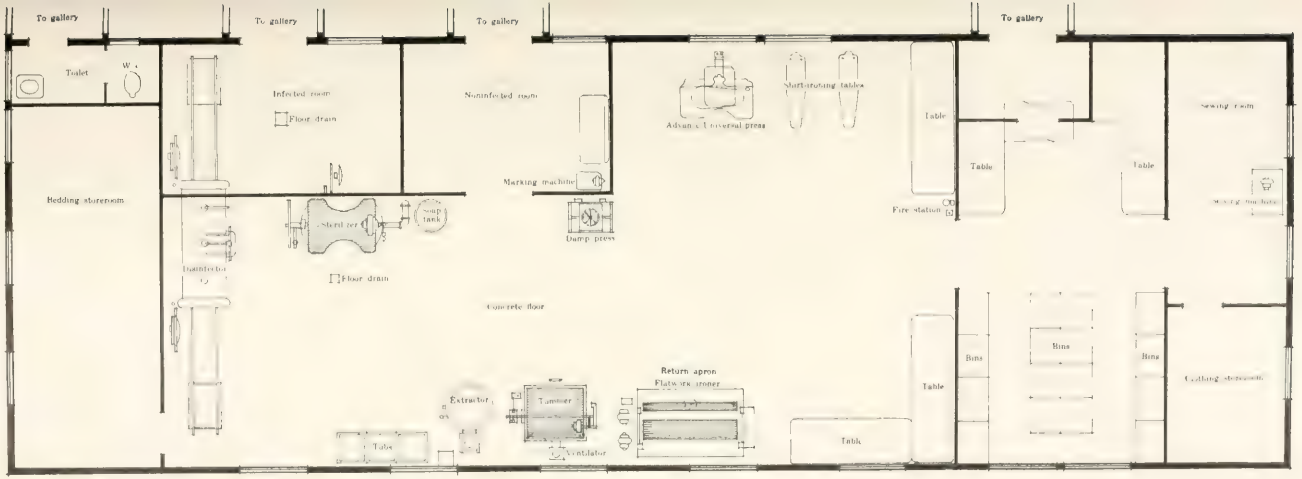


Fig. 6 (No. 11 in general view). Laundry pavilion of Rockefeller Institute Base Hospital. All partitions run to the height of the wall plate.

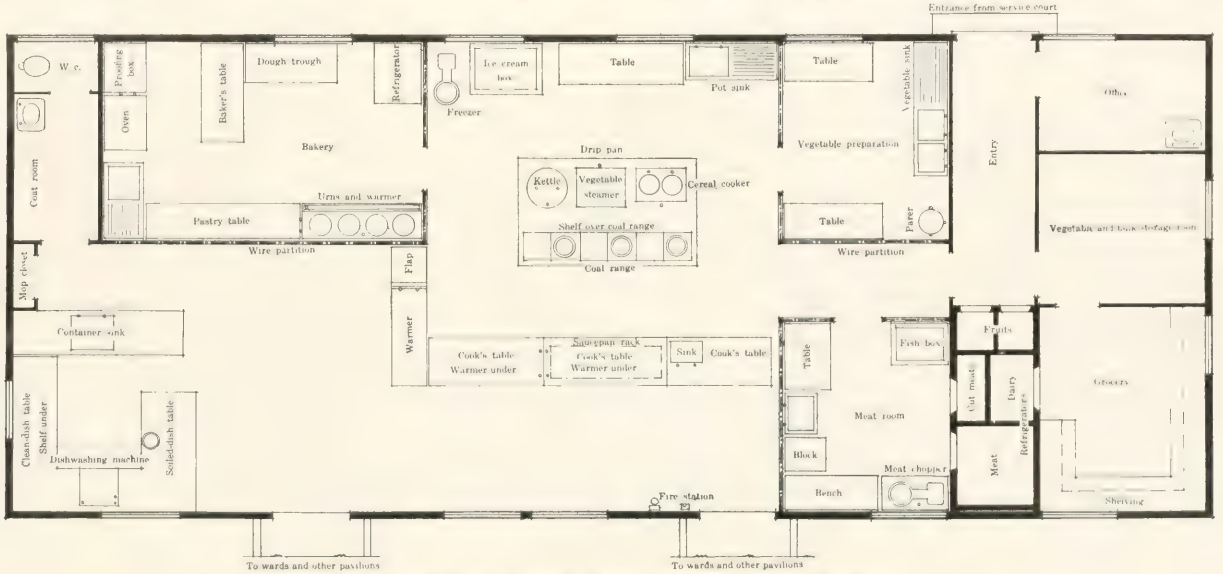


Fig. 7 (No. 10 in general view). Kitchen pavilion of Rockefeller Institute Base Hospital.

ing, etc. He also examines all arriving patients and determines the order in which they are to be bathed and sent into the wards.

The operating pavilion is naturally of especial interest in a war hospital. For this building, 105 feet in length, the wider type of unit, 28 feet wide, with walls 10 feet high, has been adopted. The building lies east and west, so as to secure north light all along one side.

Of the two entrances, one, to the east, is reserved for doctors, nurses, and orderlies, while by the other, patients are brought in. Orderlies coming for their supply of sterile bandages for the wards do not pass beyond the vestibule at the east entrance.

At the east end is a large work room for nurses; next to this is the sterilizing room, easily accessible from the operating room. The scrub-up basins are in the operating room.

The etherizing room, nearly opposite the patients' entrance, gives access both to the operating and the plaster rooms, while the west end of the building is occupied by the x-ray service, with dark room and demonstration and storage room.

The plan of the wards follows very closely that of the surgical hospital of peace times. Oriented north and south, the services are grouped at the north end, so as to allow the free entrance of the winter sun at the south end. This arrangement, while not a necessity in southern climates, is most desirable in a country like France, where every ray of sunlight is precious.

At the south end of the ward is a terrace, cooled in summer by awnings, onto which patients' beds may be wheeled without waiting for them to be convalescent.

Adjoining the ward, on the west side of the corridor, is the nurses' office and linen room, with glazed sash permitting the surveillance of the ward and of the isolation room, to the north of which is the diet kitchen, containing steam table with electric cooker, sink, refrigerator and dresser.

At the east side of the corridor are the bed-pan sink room adjoining the ward, the patients' toilets and lavatories, the sterilizing room, the bath room and the housemaids' sink room, containing soiled clothes bags, brooms, mops, etc.

As all dressings are made in the wards, no surgical dressing room is required.

The bathtub is so placed that a stretcher may be run into the bath room and yet leave space for handling the patient.

On each side of the ward two panels are hinged at the bottom and arranged to swing out in order to permit the rapid evacuation of the building in case of fire.

The small isolation building requires no extended description. The vestibule gives access to the diet kitchen by a window, below which is the combined steam table, sterilizer and electric cooker.

The movable tub is placed on the hallway ready to be wheeled into any room in which it may be needed. A gooseneck for filling this tub and same for emptying, also bed-pan and housemaids' sinks are placed just inside the door leading from the vestibule.

To the north of the wards, on the Avenue A side of the service court, is the recreation building, consisting of a small library and a reading and recreation room for convalescent patients. Adjoining this building, to the east, is the mess hall, a double building, one end being for nurses and the other for orderlies, each having its coat room and pantry.

The kitchen is planned with the entrance for supplies on the service court, the checking office being just inside the door, with vegetable storage adjoining. Directly opposite the door is the refrigerator, with the grocery and milk room on one side and the meat room on the other.

In the center of the kitchen are the steam kettle, vegetable steamer and cereal cooker, placed back to back with the coal range. On one side is the vegetable preparation room and on the other the bakery.

The public portion of the kitchen, reached from the connecting corridor, contains the dishwasher, to which all china is brought back from the wards and mess rooms; after being washed it is stored under the cooks' tables, which form a counter separating the public space from the kitchen proper. The food cars remain in the kitchen between meals, picking up their loads at the pastry table, tea and coffee urns, and cooks' tables.

The laundry building has two receiving rooms, one for infected clothing, linen and bedding, which must pass through either the sterilizing washer or the steam and formaldehyd sterilizer, and the other for ordinary soiled linen. Mattresses and pillows, after sterilization, are stored at the west end of the building, while the linen, after drying and pressing, is stored near the east end on tables and in bins, the mending room and small clothing storage room being placed at the extremity of the building.

The stores building at the northwest corner of the property consists of a large open storeroom, one side of which is furnished with racks for small objects and the other half left free for heavy storage, a small carpenter and paint shop and a small office for the storekeeper.

There remain to be described only the living

quarters. The nurses' building contains a small sitting room with pantry and electric cooker, bedroom and bath for the superintendent, and twelve single and two double bedrooms for nurses. There are also bathtubs, toilets, slop sink, and lavatories and a small linen and store closet.

The maids' building is similar, but with more double and fewer single rooms, while the orderlies' quarters are divided into a large dormitory and a few rooms for sergeants, a sitting room and a room for cleaning equipment, boots, etc.

The method of construction of these buildings is of interest; with the exception of the stores building, which is of ordinary shack construction, all are of portable house unit construction, walls, floors, and roofs being formed of panels. In the early days of the war, such buildings were erected with a single thickness of material for walls, but it very shortly became apparent that the walls must be made double with an air space between the outer and inner sheathing, while the desirability of double roofs and floors was recognized.

A study of the various types of construction led to the adoption of the Humphreys system, a patented English type, which had been employed in the best base hospital in France, that of the British Red Cross and St. John's Guild at Etaples, south of Boulogne (shown on another page, "A Spring Night in a British Hospital in France"). The system has been very considerably modified at the suggestion of Messrs. Marc Eidlitz & Son, the contractors for this work, and Messrs. Sloane & Meller, who have built the panel sections, both concerns having suggested various improvements which make the system fit more closely with our methods of construction.

The two particulars in which the system is markedly superior to others are the steel trusses and the type of windows with lower sash fixed and upper sash hinged at the bottom to swing in, provided in the case of the wards with check pieces to prevent draughts. This arrangement makes the spacing of beds entirely independent of the windows, a feature not to be disdained in a war hospital, where at the moment of an attack the number of beds per ward may be easily increased 25 or 30 percent.

The unit employed in this system is 5 feet in length, either 8 or 10 feet in height, the windows in the 10-foot units having three sashes instead of two. The standard widths of this system are 16, 22, and 28 feet. Thus a building may be erected of either of these widths and in length any multiple of 5 feet, this 5-foot unit being probably the most practical. The panels are small enough to be easily handled, and yet large enough to permit of an ample window or double doors in one panel.

Steam is furnished by the existing power house, the pipes being placed in the roof of the connecting corridors. Laundry and kitchen, operating and sterilizing rooms are similar in equipment to those of any modern hospital. The heating is by pipe coils, which were adopted in preference to radiators, as being less liable to breakage if it became necessary to transport and reerect the hospital. The hot-water supply for the various buildings is furnished by steam coil tanks, so placed that one tank can supply a group of three or four buildings, the length of runs being thereby much reduced.

The plumbing is that of a permanent hospital, but with the suppression of all frills. The electric wiring is exposed throughout, the fixtures, except in wards and operating building, being merely bulbs with painted tin reflectors.

The hospital has also a complete intercommunicating telephone system and a fire alarm system with watchman's clock, while hydrants and fire extinguishers are placed in convenient locations outside and within the building.

If I have spoken thus at length of matters of construction and equipment, it is in order to bring out the fact that base hospitals are today being built and equipped to give the best of surgical care to patients who can be as comfortable as if they were in permanent hospitals.

War is hell, and there is much discomfort which is unavoidable, but in the matter of base and field hospitals immense progress has been made by Great Britain and France, and we owe it to our soldiers to insist that they also shall have the best available, and we know that the best is available if we are willing to pay for it, as we must pay for anything which is worth while.

Our experience of three years of war has shown us that many lives and limbs may be saved if proper hospitals are provided, and how much our losses will be increased if we try to get along with the old inadequate equipment with which we have "muddled through" in the past. Failure to heed the lessons of the war implies criminal inefficiency.

While the Rockefeller War Demonstration Hospital is a base hospital, a modern field hospital, if in buildings, should be in buildings of exactly the same type. The French have found that failing the double-walled building, the double-walled tent is preferable to the single-walled building. Connecting corridors would naturally not be closed, and in most cases would not be covered, but the slat walk connecting all buildings by inclines and without steps should always be present.

For a field hospital the plumbing system must perforce be simplified as must the heating system.

Probably the best method of heating is in the employment of small low-pressure boilers, each arranged to heat a group of three or four buildings. Stoves are objectionable from every point of view, dirty, dangerous and wasteful of coal, and in more and more hospitals are being replaced by steam heat. There should also be a small high-pressure boiler to care for sterilizing and perhaps also for cooking and washing in the case of a large field hospital.

The portable ice machine installed in the Rockefeller Hospital is suitable for a base hospital, while ice for field hospitals would doubtless be distributed from a base rather than manufactured on the spot. The electric installation would of course be the same for the field as for the base hospital, including x-ray equipment.

The erection of the Rockefeller Hospital was begun on June 1, and the buildings are now, July 13, complete and ready for occupancy; that this result was achieved in six weeks is due to the intelligent handling of the work by the general contractors, and the hearty cooperation of each and every trade employed on the work.

In closing, let me refer to the great service rendered to the community by the Rockefeller Institute in placing in concrete form before the medical and architectural professions the base hospital as it exists at its best on the front in France. Many of us have seen the hospitals there, but a description, no matter how detailed and accurate, is of little value in comparison with the completed buildings in which the good qualities and defects stand out for criticism and praise. It is my hope that this group will as a whole meet with the approval of our professions, and that we may in turn reap the benefit of the criticisms which it may call forth.

WHAT THE STATE OF ILLINOIS IS DOING FOR ITS BLIND

Vocational Instruction Given the Blind by the State—Trades and Crafts Followed by the Blind

BY CHARLES E. COMSTOCK, State Superintendent of the Department of Visitation and Instruction of Adult Blind, Chicago.

Illinois is among the foremost of the states of the Union in its work of assisting the blind to help themselves. Besides providing instruction for the sightless children at the State School for the Blind at Jacksonville, at an annual cost of over sixty thousand dollars, maintaining a home where blind men and women have an opportunity of working and earning at least a part of their living, providing pensions for the needy blind, and financing the State Eye and Ear Infirmary, where all is done that is possible to prevent the loss of sight, the state furnishes individual instruction to the adult blind in their homes in such occupations as will tend toward ameliorating their condition and making them self-supporting.

The subjects taught by the Department of Visitation and Instruction of Adult Blind are the reading of Moon type, the reading and writing of full and contracted Braille, typewriting, embossed shorthand, operating the dictating machine, raffia and reed work (basketry), hand and machine sewing, hammock-making, chair-caning, knitting, crocheting, and other domestic arts, rug-weaving, fiber strand chair-making, broom making, and piano-tuning.

Of the five members of the teaching staff, including the managing officer, four are without vision, as it has been found that such teachers more quickly inspire a prospective pupil with his own capabilities.

Many a life has been taken from the depths of despair, in which the one idea is too often that of self-destruction, and lifted into happiness and made to feel that life was still worth the living. Our embossed books and magazines not only afford pleasure to those in darkness, but also lighten the burden of the family.

As an illustration of the benefit the department can furnish to those to whom active business life is impossible, the accomplishment of Mr. William McPherson, of Highland Park, blind and without arms, having learned to read the embossed Moon type with the tip of his tongue, will ever stand as a glowing tribute to the patience of his teacher, Miss Johnson, by whose help his life has been opened into greater fullness.

Several pupils of the department are both deaf and blind. The ability to read embossed type means much to these doubly afflicted ones, while to the aged and those in poor health the reading and the simpler handicrafts bring pleasure and relief from the desperate weariness of unoccupied hours.

To those who have been assisted to earn a partial or entire livelihood, home instruction has indeed proven a boon. Miss Hannah Kaplin, of Peoria, has put her knowledge of chair-caning to good use, as she has the entire business of two of the most prominent stores, and earns a fair living. Among the best trades for blind men are broom-making and piano-tuning. If one could step into the broom shops established by such ambitious men as Messrs. John Gentille of Champaign, W. H. Lakin of Westville, and George Barton of Mason City, for instance, the observer would gain a vivid impression of the capabilities of the blind under the stimulus of suitable instruction and encouragement. Of those learning piano-tuning, a noteworthy instance is the success of Mr. Michael Lawler of Peoria, a young man of about 28 years, who for eight years after losing his sight and before our teacher first called on him, had remained practically in idleness. When he learned to read, his people were kept busy in receiving and returning the embossed books furnished by the Jacksonville and Chicago libraries. When he took up tuning, he sat up nights to practice, and after he mastered the trade, he secured a position with one of the best music houses in his city and is now busy doing custom work. He receives $3 for each piano he tunes, tuning one a day on the average. Recently, when a special sale on pianos was being held, Mr. Lawler tuned thirteen pianos in one week, and was paid $3 for each job.

It is gratifying to see not only the progress that the blind are making themselves, but also the great interest our sighted friends are manifesting, and we are convinced that they are doing their utmost to give the sightless every opportunity to exercise their capabilities. In other words, man's humanity to man makes countless thousands rejoice.

The Cleveland-Cliffs Iron Company, Ishpeming, Mich., is planning the erection of a hospital.

CONVERSION OF YACHTS INTO AMBULANCE BOATS

General Principles to Be Observed in Converting Small Boats Into Hospital Launches—Equipment and Facilities Should Be Comparable With Those of Ordinary Hospital Ambulances—Special Devices for Handling Patients and for Saving Space

By Passed Assistant Surgeon W. E. EATON, Bureau of Medicine and Surgery, U. S. Navy

"HOSPITAL SHIPS," "hospital transports," "ambulance ships," "ambulance boats," are various terms used in description of vessels used for transporting the sick. These vessels are as essential to the general efficiency of any military force, particularly the naval force, as arms and armament. A large number of hospital ships and also ambulance or hospital launches are being employed by the European combatants now at war ships and ambulances of a makeshift character and usually never can be so satisfactory for the purposes intended as those which are built from the keel up upon an acceptable design and with equipment suited to the needs of temporarily housing patients for passage to the base or elsewhere requiring but a few hours to accomplish.

Such yachts, etc., as may be available for conversion will in most instances be not of sufficient

Fig. 1. A hospital ship of the United States navy. This ship presents the general appearance of having been constructed throughout and originally from the keel up as a completely equipped and specially designed hospital ship.

to transfer from the various fields of conflict to base hospitals or to the home land the victims of the enormous casualties. Many of these ships and small launches have been converted to hospital purposes from a former merchant, passenger, or pleasure craft. When the plans followed for conversion are based upon features derived from a continuously lengthening experience in such alterations of type and structure, the boats result in a fairly satisfactory means of caring for the sick and wounded.

At best, yachts, boats, etc., which are possible of conversion and are converted, result in hospital size to warrant the installation of the complete equipment necessary for hospital ships, but rather the development of their compartments and conveniences as already installed along plans which require the least change in fittings necessary to render them satisfactory for the temporary residence and voyage of patients from a large hospital ship or the vessels of a fleet to a nearby base hospital or shore.

Much adaptation of the conditions and circumstances as they exist must occur in accordance with the requirements and purposes in view, and this requires great judgment and foresight in

planning alterations and minor details in order that the particular craft under consideration may be appropriate to the service to be rendered.

These ambulance boats must be viewed from much the same angle as are the ambulances of a civil hospital answering accident calls, and their equipment and facilities therefore should conform in a similar manner to what may be reasonably expected for the service to be performed.

It is therefore along these lines that the few suggestions herein offered will be outlined.

Fig. 2. Stokes' splint stretcher for handling patients at sea.

As a general rule, those vessels are preferable which are capable of making good speed, and which have few cabins, partitions, etc., to be ripped out, or other extensive alterations in conversion. Yachts and boats should be of a reasonable size, not less than 50 feet over all, 10 feet beam, and of about 3 to 4 feet draft, seaworthy, stanch, and well constructed, not liable to an unusual amount of motion, rolling or pitching, nor should they as a rule take water over the bow under ordinary circumstances. A dry ship is essential to adaptability for hospital purposes.

For the large type of fleet hospital ship it would appear that those of from 7,000 to 8,000 tons are best adapted to conversion for purposes of hospital transport. The large-sized yachts are more desirable for this purpose than those of the house-boat or sporting type.

Compartments should be of reasonable size to accommodate, without undue crowding or discomfort, several patients either on stretchers or sitting.

Ease of access both to the boat's gangways and also to the compartments is a prime factor and should be given the greatest consistent consideration in preparing plans on account of the often extreme difficulty of transshipping patients at sea. Unnecessary turns in passageways and stair or ladderway should be avoided. Doors and hatches should be of sufficient width and height to permit of no interference with the passing and handling of stretchers, cots, etc.

The handling of patients has always been a problem, and many features and difficulties are yet unsolved. The motion not only of the hospital ship or battleship, but also of the small launches and transports due to the heave and fall of the sea, requires that the greatest care and expedition be exercised in transshipment in order to avoid injury, submersion or actual loss of the patient. Special hoisting apparatus or methods must be available and are indispensable. Gangways must permit of the greatest facility for the handling of stretcher cases.

Fig. 3. Use of hoisting apparatus for taking patients on board by means of Stokes' splint stretcher. The patient is securely strapped into the stretcher, to which is attached a sling of special type.

For an ambulance boat, therefore, it will appear that the most necessary facilities are one or more open wards suitably equipped with cots of a permanent or semi-permanent type for the reception of stretcher cases, compartments for

sitting cases, which may not be provided with cots or may be provided with folding cots should it become necessary to use them for any purpose, such as additional bed cases or trips requiring overnight to reach destination.

Ward cots or bunks should be of a type which allows of their being folded against the bulkheads, removed from fastenings, stacked at one side, etc., in order that the compartment may be cleared entirely, ingress and egress made more free, or only such bunks as are required may be used, while the remaining space is available for other purposes. Semi-permanent, swinging or folding bunks may seem more desirable in one compartment or boat, while in another permanent installations may be considered expedient.

Fig. 4. Patient in stretcher run in on deck.

In most instances, particularly when the craft is small, double-tier arrangements of bunks may be necessary in order to put the compartment to its fullest use, though crowding and insufficiency of air space per man should be avoided.

Metal frames of suitably sized piping supporting a wire spring with sides to hold the mattress from slipping are to be selected not only for strength and cleanliness, but also for service. Such construction makes it possible to install the bunks in either a permanent or a swinging or folding manner, and has all the advantages of open, freely accessible, easily cleaned, sterilized and fumigated fixtures.

There are several types of these bunks now on the market and in use in hospital ships, battleships, hospital cars, barracks, camps, troop trains and troop ships.

In any event, the bunk should be so constructed of the proper material and then so supported as to give the greatest comfort to and prevent undue jolting of the patient when the boat is in motion.

For those compartments set aside for sitting cases or for use as emergency wards, additional cots of the folding army type used in camps, or a cot specially designed for hanging from the overhead deck or bulkheads or sides of the boat may be

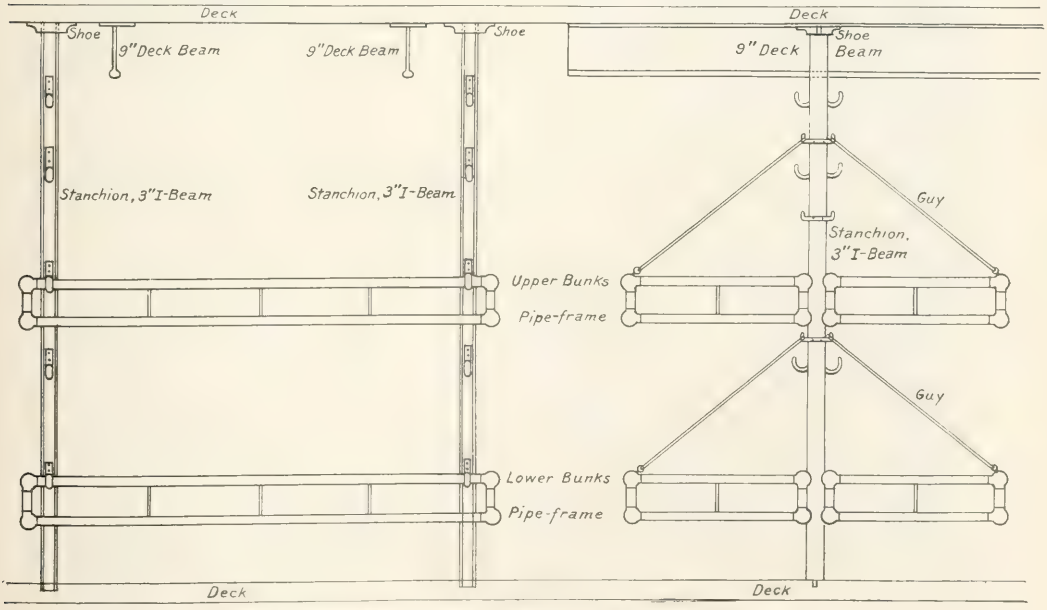


Fig. 5. Design for a type of folding bunk bed for use in a sick bay or hospital ship.

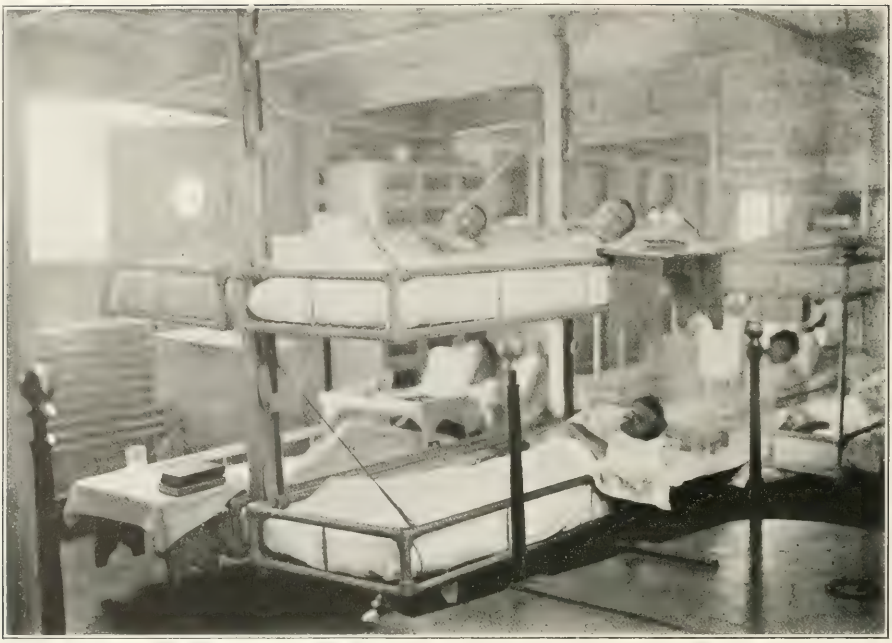


Fig. 6. View of folding beds in use.

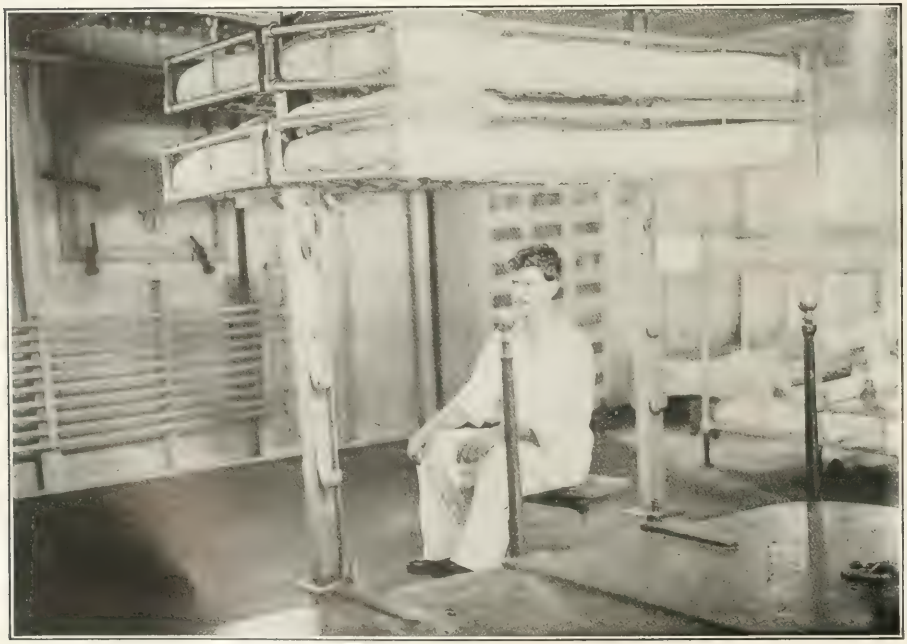


Fig. 7. One method of disposing of unused bunks.

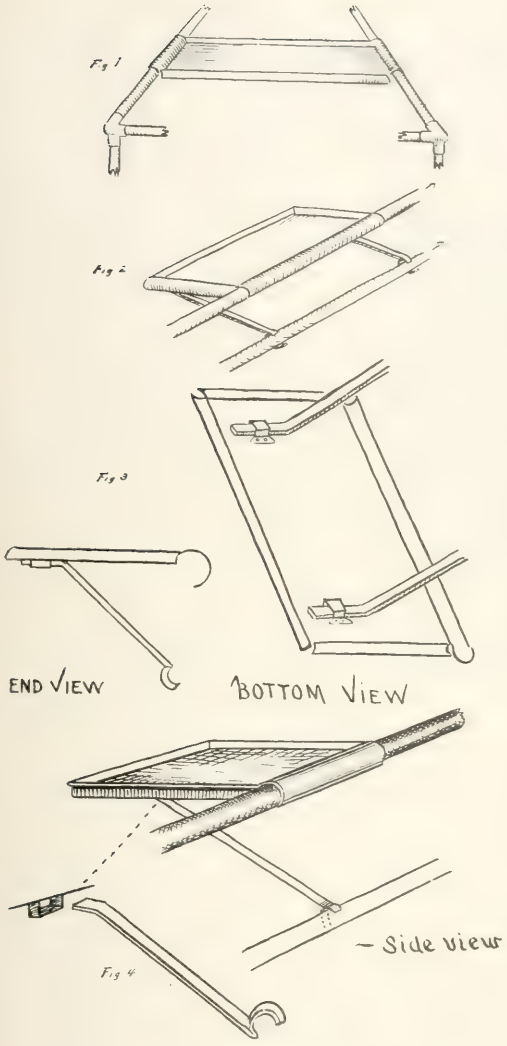


Fig. 8. Design for bunk tray for use at meals, in writing, etc.

stored in an accessible space. These cots may be useful, should an unusual number of bed and stretcher cases be at hand, or as beds for sitting cases if the voyage must be made at or include the night. These provisions will depend much upon the size of the vessel under conversion.

To meet the temporary requirements in caring for patients there should be, adjacent to these wards, bath, toilet, and lavatory fixtures, an emergency dressing and minor operating room with equipment for the sterilization of instruments and dressings for the immediate use of personnel and for the care of those cases requiring further attention than given at the time of injury to safeguard life, linen and dressing closets, a dispensary, medical storeroom, and staterooms for the medical and hospital attendants.

Such special provisions, as for the x-ray, dentist, laboratory, etc., as are found on the larger hospital ships have no place on board the smaller craft, as it is not here that the nicer details will be practiced, but rather the application of primary or secondary first aid.

A general kitchen of sufficient size and with suitable equipment for preparing and supplying food to patients en route should be placed so as to serve its purpose to the best advantage.

The equipment of baths and toilets should be of some standard type designed for sea-going craft, and installation should be most carefully performed in order that the fixtures in service shall be satisfactory. Too great care cannot be given this feature, which becomes most unpleasant and disgusting if improperly constructed.

Kitchen equipment should likewise be of a desirable type suitable for the boat and the amount of work to be undertaken there. In some instances it may be necessary only to provide for keeping warm food and drink which has previously been prepared on shore or aboard a ship where adequate facilities were at hand.

Both in the plumbing and kitchen appliances the judgment and foresight of those preparing the plans must be the determining factor.

The propelling machinery, whatever the kind, must receive its full share of planning and attention. There must be an adequate and satisfactory means of power, since breakdowns of the engines render the boat and its service not only unsatisfactory and undependable, but practically useless, as occasion for frequent repairs results in the boat not being ready for service when most needed. Internal-combustion engines are particularly desirable for small boats, doing away with the provisions for carrying coal, and are usually capable of a longer cruising radius.

Effective ventilation for all compartments must be fully supplied, especially where there is the ever-present possibility that it may become necessary on occasion to fill all available bunks and spaces with sick and now and then crowd in an extra case. It must not be forgotten that all the fresh air it is possible to obtain under the circumstances is absolutely essential for boats, particularly the smaller ones, for, in order to keep out water and keep dry the compartments, ports, doors, hatches, etc., the normal means of allowing the free circulation of air, must all be tightly closed. Even the artificial and auxiliary means of

supplying air may not be adequate for the purpose, or must be interfered with or closed while the boat is breaking through rough water.

It is therefore essential to the best interests of all hands on board that all the compartments for engine rooms, wards, kitchens and crew spaces be possible of constant and complete ventilation and movement of air. Revolving fans run

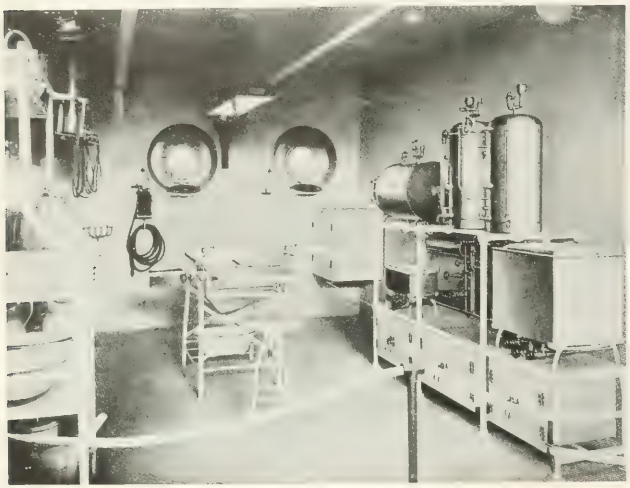


Fig. 9. Operating room of a battleship of the United States navy.

by electricity or otherwise are of greatest value in maintaining a movement of the air in closed spaces, where stagnant air would otherwise exist from lack of outside source of free air.

There must be provided an inlet and an outlet, for each compartment housing men, by means of cowls, which may be turned in any direction. If this is not the case, free circulation of air by natural means cannot readily exist, and when hatches and ports are battened down no air can enter except by diffusion from neighboring compartments. For trips under rough weather conditions these cowls are absolutely necessary and several should be of a mushroom type, admitting air but excluding water.

General sanitary features must be given consideration. It must be possible to clean thoroughly all parts of the vessel; there must be no inaccessible corners, pockets, recesses, dark cupboards, or wet places. The bilges must be kept thoroughly drained, clean, and disinfected at all times. Partition walls and general surfaces must be easily cleaned, painted, and smooth. Floors must be kept dry and covered with a suitable protective agent (as linoleum) which is firmly and completely adherent to the deck. Water or other fluids must not gain access to breaks in this surface or be allowed thereby to pass beneath the linoleum, as decomposition soon occurs and a possible source of infectious agents exists and must be dealt with.

A compartment separate from the wards and spaces for the sick needs be set aside for the use of such crew as is required to handle the boat. Here, again, crowding, faulty ventilation, and uncleanly equipment and conditions must be strictly avoided.

As a closing admonition, let it be remembered that to provide for the care of sick and wounded at sea differs widely from their care on shore, and that usually those unaccustomed to such practice cannot realize or design the peculiar facilities necessary, often under the most adverse conditions.

It is therefore suggested that in each instance, before reconstruction or conversion is commenced, the plans and equipment under consideration, or to be followed, be referred for survey, suggestion or revision to a naval medical officer, fully cognizant of the requirements for and uses of hospital and ambulance ships.

Conservation of the Health of Munition Workers

A recent number of the *British Journal of Nursing* contains a description of a hospital for women at the great munition works at Woolwich, where about 30,000 women and girls are employed. Inside the arsenal fourth gate is a hospital of forty beds for women. The entire medical staff consists of women. The work includes much more than the care of patients admitted to the wards. All the women employed in the works are thoroughly examined by a medical officer before being employed, special observation being made of hernia, varicose veins and flat feet. The hospital proper contains a medical and a surgical ward. In the surgical ward are four beds for accident cases. There is a large out-patient department which, however, is inadequate for the demands made on it and is being enlarged. There are, of course, bad accidents. Some of the medical cases are characterized by puffiness of the face, due to the toxic nature of the explosives among which the girls work.

By special arrangement with the Federal Government of Canada, a wing of the Royal Columbian Hospital, New Westminster, B. C., has been set aside for the accommodation of three hundred invalided soldiers. The board of directors of the hospital have just installed new, up-to-date x-ray equipment at a cost of nearly $4,000.

EMERGENCY HOSPITAL CONSTRUCTION FOR THE U. S. NAVY

Buildings Are of One Story, of Wood Construction and Ready-to-Lay Roofing—Observation Ward With Exclusive Entrance—Other Wards Arranged for Isolation When Required—Special Building for Kitchen and Dining Rooms for Well People

By Surgeon-General William C. Braisted, U. S. Navy

SUDDEN demands for naval hospital accommodations for men already enlisted and for men in training has necessitated the development of a type of hospital layout for quick construction and capable of easy expansion. In most cases the hospital will be a self-sustaining group, each group being provided with its own heating plant, laundry, disinfecting machinery, store house, and the various buildings needed to meet the usual requirements for administrative, ward, operating and subsistence purposes. A unit group is designed for 200 beds.

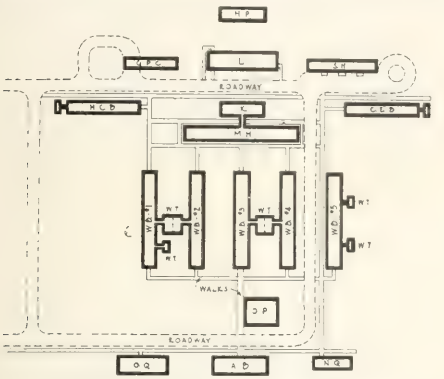
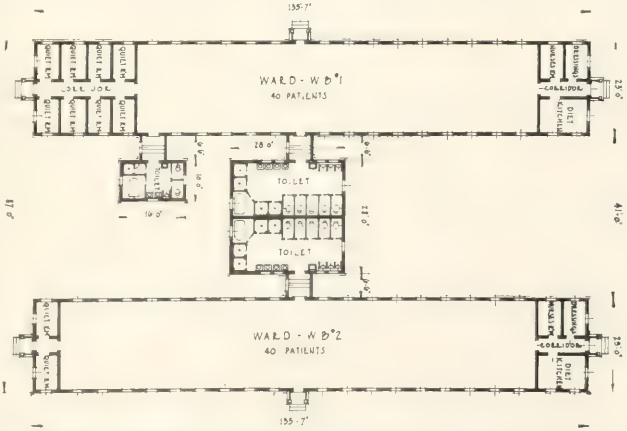


Fig. 1. Typical emergency hospital layout; capacity, 200 patients. The ward plan is shown in Fig. 2.

A. B. Administration building.
O. Q. Officers' quarters.
N. Q. Nurses' quarters.
O. P. Operating pavilion.
W. B. Ward building.
W. T. Ward toilet.
M. H. Mess hall.
K. Kitchen.
H. C. B. Hospital corps' barracks.
C. E. B. Civilian employees' barracks.
L. Laundry.
G. P. C. Garage, paint, and carpenter shop.
S. H. Store house.
H. P. Heating plant.

The buildings are one story, of wood construction, with exterior walls of drop siding, and interior walls, partitions, and ceilings sheathed with ceiling, except in the operating pavilion, which is plastered throughout. The roofs are covered with a ready-to-lay roofing. Steam, furnished from a small heating plant, is used for heating the building and is provided for sterilizing, disinfecting, and cooking apparatus. The lighting is by electricity, simple in layout, using intensive reflectors and frosted lamps. Plumbing is of the best commercial type.

The service of the hospital will bring the patient to the administration building for examination or to the operating pavilion for operation. A covered walk way leads from the administration building to the operating room and thence to the surgical ward so that surgical patients need not be carried through the open. Ward A is separated from the other wards by a drive, making it possible for observation cases to enter that ward without passing through any other building. Ward 5 has separate toilet so that the main ward room may be partitioned for use in cases of contagion or observation. The ward is provided with two toilets, the small one being reserved for the use of special cases or for officers. Each ward cares for 40 patients nominally. A general mess building is provided for patients, hospital corps, doctors, nurses, stewards and pharmacists, and civilian employees, with one kitchen so that the labor of preparing and serving food is reduced to a minimum. Inclined ways from the kitchen to walks provide easy means for transportation of food in food carts. The laundry is placed to the rear of the group of buildings near the heating plant and as far as possible from the wards. All service of the buildings, except for entrance of patients and doctors, is confined to the rear.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HOSPITAL ORGANIZATION UNDER THE WAR DEPARTMENT

Rosters of the Three Classes of Hospital Units Organized and Present Status of Each Unit—Units Which Have Been Sent to the Front and Those Ordered to Sail

By JOHN ALLAN HORNSBY, M. D., Major Medical Reserve Corps, U. S. Army

THERE seems to be a good deal of misconception and misunderstanding and want of information as to just what the War Department is doing about medical and hospital services for war purposes. In order that the hospital people may know just what is being done and what has been done, we are attaching the rosters of the three classes of hospital units that have been organized, with the present status of each unit.

It will be noted that only seven base hospital units have been sent to the front and that only three others have been ordered to sail.

Colonel Kean, director of the American Red Cross, is of the opinion that very few more of these base hospital units, if any, will be called for, as he has been informed that it is the wish of the surgeon-general of the army to have medical men apply for commissions in the medical reserve corps as individuals and not as members of groups. Each base hospital unit is composed of approximately 25 doctors, 2 dentists, 50 nurses, 25 volunteer nurses' aids, 150 male administrative enlisted personnel, 15 civil employees and such Red Cross volunteers as the secretary of war may authorize.

All the base hospital units that have gone to Europe are now at work in base hospitals in France, the units being sent there largely to relieve the tired-out and work-worn English and French personnel.

AMERICAN RED CROSS ARMY BASE HOSPITALS AND DIRECTORS

No.	Parent institution	Location	Director	Address
1	Bellevue Hospital	New York City	Dr. Edw. L. Keyes	109 E. 34th st.
2	Presbyterian Hospital*	New York City	Dr. Geo. E. Brewer	16 E. 64th st.
3	Mt. Sinai Hospital	New York City	Dr. N. E. Brill	Mt. Sinai Hospital.
4	Lakeside Hospital*	Cleveland	Dr. Geo. W. Crile	1021 Prospect st.
5	Harvard University*	Boston	Dr. Harvey Cushing	Peter Bent Brigham Hospital.
6	Massachusetts General Hospital†	Boston	Dr. F. A. Washburn	Massachusetts General Hospital.
7	Boston City Hospital	Boston	Dr. J. J. Dowling	Boston City Hospital.
8	New York Post-Graduate Hospital	New York City	Dr. Samuel Lloyd	12 W. 50th st.
9	New York Hospital	New York City	Dr. C. L. Gibson	72 E. 54th st.
10	Pennsylvania Hospital*	Philadelphia	Dr. R. H. Harte	1503 Spruce st.
11	St. Joseph, St. Mary and Augustana Hospitals	Chicago	Dr. A. J. Ochsner	2106 Sedgwick st.
12	Northwestern University Medical School*	Chicago	Dr. F. A. Besley	104 S. Michigan ave.
13	Presbyterian and County Hospital	Chicago	Dr. Dean D. Lewis	122 S. Michigan ave.
14	St. Luke and Michael Reese Hospitals	Chicago	Dr. L. L. McArthur	122 S. Michigan ave.
15	Roosevelt Hospital†	New York City	Dr. Charles H. Peck	30 W. 50th st.
16	German Hospital	New York City	Dr. Fred Kammerer	51 E. 66th st.
17	Harper Hospital†	Detroit	Dr. Angus McLean	David Whitney Building.
18	Johns Hopkins Hospital*	Baltimore	Dr. John M. T. Finney	Johns Hopkins Hospital.
19	Rochester General Hospital	Rochester	Dr. John M. Swan	457 Park ave.
20	University of Pennsylvania	Philadelphia	Dr. John B. Carnett	123 S. 20th st.
21	Washington University Medical School*	St. Louis	Dr. Fred T. Murphy	5738 Cates ave.
22	Milwaukee County Hospital	Milwaukee	Dr. C. A. Evans	809 Wells Building.
23	Buffalo General Hospital	Buffalo	Dr. Marshall Clinton	556 Franklin st.
24	Tulane University	New Orleans	Major Jno. B. Elliott	Maison Blanche Building.
25	Cincinnati General Hospital	Cincinnati	Dr. Wm. Gillespie	670 June st.
26	State University of Minnesota	Minneapolis	Dr. Arthur A. Law	420 Syndicate Building.
27	University of Pittsburgh Medical School	Pittsburgh	Dr. R. T. Miller	Diamond Bank Building.
28	Christian Church Hospital	Kansas City	Dr. J. F. Binnie	Rialto Building.
29	City and County Hospital	Denver		
30	University of California	San Francisco		
31	Youngstown Hospital	Youngstown	Dr. Colin R. Clark	415 Bryson st.
32	City Hospital	Indianapolis	Dr. Edmund D. Clark	1236 North New Jersey st.
33	Albany Hospital and Medical College	Albany	Dr. A. E. Eltin	119 Washington ave.
34	Episcopal Hospital	Philadelphia	Dr. A. P. C. Ashhurst	811 Spruce st.
35	Good Samaritan Hospital	Los Angeles	Dr. J. J. A. Kaathoven	Grand ave. and Seventh st.
36	College of Medicine	Detroit	Dr. Burt R. Shurly	32 W. Adams st.
37	Kings County Hospital	Brooklyn	Dr. Edwin H. Fiske	132 LaFayette st.
38	Jefferson Medical College	Philadelphia	Dr. W. M. L. Coplin	Jefferson Hospital.
39	Massachusetts Homeopathic Hospital	Boston	Dr. Wm. Wesselhoeft	Director.
40	Good Samaritan Hospital	Lexington, Ky.	Dr. David Barroe	Director.
41	University of Virginia	University, Va.	Dr. Wm. Goodwin	Box 453.

*Have sailed.
†Under orders to sail.

RED CROSS HOSPITAL UNITS

There have been organized eighteen so-called Red Cross hospital units, as shown by the roster below. These units have not yet been called into active service and it is not known just exactly when or under what circumstances they will be ordered to duty. These hospital units consist of approximately one-half of the personnel of the base hospitals, 12 doctors, 21 nurses, and such enlisted people, including orderlies, as may be necessary.

AMERICAN RED CROSS HOSPITAL UNITS

	Location	Director	Address
A	Philadelphia, Pa., Presbyterian Hospital	Dr. John H. Jopson	1824 Pine st., Philadelphia.
B	Yonkers, N. Y.	Dr. S. E. Getty	84 Ashburton ave., Yonkers.
C	Spokane, Wash.	Dr. S. E. Lambert	Old National Bank Bldg., Spokane.
D	Louisville, Ky., Louisville City Hospital	(Director not yet named.)	
E	Richmond, Va., Memorial Hospital	Dr. Robert Bryon	Grace Hospital, Richmond.
F	New York City, Harlem Hospital	Dr. Lewis K. Neff	1213 Park ave., New York City.
H	New York City, Fordham Hospital	Dr. Alex. Nicoll	119 W. 88th st., New York City.

	Location	Director	Address
I	Anderson, Ind., St. John's Hospital	Dr. J. B. Fattic	Union Bldg., Anderson.
K	Council Bluffs, Iowa	Dr. Donald McRae	City National Bank Bldg., Council Bluffs.
L	Pittsburgh, Pa., Allegheny General Hospital	Dr. E. W. Caldwell	Allegheny General Hospital, Pittsburgh.
M	Fort Wayne, Ind., Hope Hospital	Dr. Allan F. Hamilton	Ft. Wayne, Ind.
N	New York City, Flower Hospital	Dr. R. S. Copeland	58 Central Park West, New York City, N. Y.
O	Charlotte, N. C.	Dr. Addison G. Brenizer, Jr.	Blandwood Apts., Charlotte, N. C.
P	Memphis, Tenn., Memphis General Hospital	Dr. Battle Maboney	Exchange Bldg., Memphis.
Q	Grand Rapids, Mich., Butterworth-Blodgett Unit	Dr. R. R. Smith	Metz Bldg., Grand Rapids, Mich.
R	Fairfield, Iowa	Dr. M. Fred Clarke	Fairfield.
S	Nashville, Tenn., Vanderbilt University	Dr. Richard A. Barr	Eve Bldg., Nashville, Tenn.
V	Syracuse, N. Y., Syracuse General Hospital	Dr. E. S. Van Duyn	Syracuse, N. Y.

AMBULANCE COMPANIES

Forty-two ambulance companies have been organized under the Red Cross, of which the list below is a roster. It will be noted that eight of these companies have been called to active duty and are now in training camps at Allentown, Pa., and Ft. McPherson, Ga.

In addition to these units, there have been organized a number of surgical sections, and it is the intention of the War Department to use these surgical units as flying squadrons or emergency groups wherever they may be needed. These surgical sections are composed of 1 director, 3 surgeons, 1 head nurse, 6 nurses, and a clerk, who is also to be stenographer. Since these rosters were published Colonel Jefferson R. Kean has been relieved as director of the American Red Cross and has been ordered to Europe to take command of the ambulance companies provided for in this plan. Colonel Kean is to have direction of the training and distribution of these ambulance companies, and it is understood that they are to be a part of the equipment of the American army in France.

AMERICAN RED CROSS AMBULANCE COMPANIES

No.	Location	Captain	Address
1	*Pasadena, Cal.	Charles D. Lockwood	Citizens Savings Bank Building.
2	University of California, Berkeley, Cal.	Alvin Powell	Thayer Building, Oakland, Cal.
3	University of Chicago, Chicago, Ill.	Elbert Clark	Dept. of Anatomy, University of Chicago.
4	Cleveland, Ohio	Harold D. Ruh	2500 E. 35th st., Cleveland.
5	*Washington, D. C.	Ryan Devereux	Chevy Chase, Md.
6	*Fordham University, Fordham, N. Y.	Joseph Donnelly	2790 Marion ave., Fordham, N. Y.
7	University of New York, New York City	Chester F. S. Whitney	697 West End ave., New York City.
8	Detroit, Mich.	Charles Barton	Kresge Medical Building, Detroit, Mich.
9	Northwestern University, Chicago, Ill.	Stephen V. Balderston	800 Davis st., Evanston, Ill.
10	*Columbia University, New York City	William H. Rockwell	156 E. 74th st., New York City.
11	Battle Creek, Mich.	James T. Case	Battle Creek Sanitarium.
12	*University of Washington, Seattle, Wash.	David C. Hall	4531 18th st., N. E., Seattle, Wash.
13	Pittsfield, Mass.	Robert J. Carpenter	188 Pleasant st., North Adams, Mass.
14	University of Oregon, Eugene, Ore.	John E. Kuykendall	Eugene, Ore.
15	Grand Rapids, Mich.	Thomas D. Gordon	Metz Building, Grand Rapids, Mich.
16	Fredonia, Kan.	Edgar C. Duncan	Fredonia, Kan.
17	*Boston, Mass.	(No captain)	
18	Indianapolis, Ind.	Mason B. Light	6152 College ave.
19	Portland, Ore.	Ernest H. Streit	Medical Building.
20	Atlanta, Ga.	Leo P. Daly	Chandler Building.
21	Flint, Mich.	Walter H. Winchester	801 East 9th st.
22	Charleston, W. Va.	Timothy L. Barber	915 Crescent Road.
23	Portland, Maine	Ernest B. Folsom	77 Granite st.
24	Kansas City, Mo.	Ernest W. Cavaness	Lathrop Building.
25	Rutland, Vt.	William Stickney	37 North Main St.
26	*Columbia, S. C.	Marion H. Wyman	Care Columbia Hospital.
27	Salt Lake City, Utah	Hugh B. Sprague	32 Buckingham Apts.
28	Detroit, Mich.	Griffith A. Thomas	661 Agnes ave., Detroit, Mich.
29	†Atlanta, Ga.	Walpole C. Brewer	Atlanta National Bank Building.
30	Denver, Colo.	Thomas M. Hopkins	314 Detroit st.
31	Greensboro, N. C.	Charles S. Lawrence	Masonic Temple, Winston-Salem.
32	Greenville, S. C.	James E. Daniel	Findlay Building.
33	Summit, N. J.	William H. Lawrence, Jr.	29 Bushwood Road.
34	Hudson County, N. J.	Frederick J. Quigley	543 Fulton st., Weehawken P. O.
35	Buffalo, N. Y.	(No officers appointed)	
36	Houston, Texas	Claude C. Cody	406 Gulf Building.
37	Minneapolis, Minn.	Ralph T. Knight	623 Syndicate Building.
38	San Antonio, Texas	Homer T. Wilson	Moore Building.
39	Vicksburg, Miss.	E. F. Howard	Vicksburg, Miss.
40	Fort Worth, Texas	H. B. Kingsbury	2815 Hemphill st., Fort Worth, Texas.
41	Lock Haven, Pa.	Geo. D. Green	Lock Haven, Pa.
42	Michigan	F. A. Roberts	Flint, Mich.

*Gone into training camp at Allentown, Pa. †Gone into training camp at Fort McPherson, Ga.

Equipping a Diet Kitchen

It is impossible to consider an institutional kitchen and its equipment separately, writes Ruth McNary Smith in the *Journal of Home Economics*. Every article must be purchased not only for a definite purpose, but for a definite place as well. In the case of a hospital, the equipment purchased will depend largely upon whether there is one central diet kitchen, or a smaller kitchen on each floor, to which the food it sent, and there placed upon trays. The size of the institution must also be considered.

Some of the general items necessary to equip a small hospital of 25 beds are as follows: (1) steam table, having a capacity of two meat pans and six food receptacles of heavy pottery, metal, or enamel (iron pots are not economy); (2) stove, a good gas range having six burners, two large ovens, a cake oven with glass door, and a broiler; (3) refrigerator—a central plant with pipes leading to diet kitchen is ideal, but, if not available, then purchase the best refrigerator, as it is economy, and have it lined with opaque glass; (4) sterilizer—an ordinary dish-washer is not suitable for the diet kitchen (a cylindrical receptacle, 3 feet deep and 2½ feet in diameter, having steam coils in the bottom, will give good results; the advantage of this type is its simplicity; (5) tray-rack—for sanitary reasons this should be constructed of iron pipe, enameled white, having shelves made of movable wooden rods; (6) tray lift—this should be lined with asbestos with metal cover and heated with hot water, electricity, or soapstones.

SCARCITY OF SURGICAL INSTRUMENTS AND HOSPITAL EQUIPMENT

The Situation Among Manufacturers—Emerging From a Hard-Time Period, Producers Are Making Excellent Progress for Satisfactory Output—Japanese Instruments Inferior—Medical Men Urged to "Make Something Else Do"

By VINCENZ MUELLER, Chicago, Editor of the Technical Department of The Modern Hospital

DURING the last few months the editor of The Modern Hospital has received many inquiries from subscribers concerning the true state of affairs existing in the surgical instrument and hospital equipment business, and in consequence thereof he has asked me to make a thorough investigation of the situation and present the findings, as far as possible, to our readers in these columns.

In this article I have confined myself to the surgical instrument, office and hospital equipment situation, omitting from consideration rubber goods, drug sundries, etc., for the reason that most of these items have always been of domestic manufacture and because these articles have not been affected to the same extent by the labor and material situation as those goods which are made of steel and brass, etc.

Most of the hospital managers who had been in the field some years before the European war commenced, are probably familiar with the fact that only about 30 percent of the surgical instruments made of steel were then manufactured in this country, the remainder, approximately 70 percent, being imported from abroad, about 60 percent from Germany and the remaining 10 percent from England, France and elsewhere. The reason for this state of affairs was not the fact that our dealers preferred to handle foreign-made goods in preference to the American product, but that these goods were manufactured abroad at a much lower cost of labor and material, so that our American manufacturers simply could not compete successfully with the foreign product. An additional factor, one that should not be overlooked by hospital men, was that the encouragement in the shape of a protective tariff had to a great extent been taken away from them the year before the outbreak of the war, and this reduction in the tariff made the production of steel surgical instruments unprofitable and many of the skilled men theretofore employed in the trade had to look for employment in other lines. It thus happened that when the importation from Europe was cut off and we were thrown on our own resources, the production of steel surgical instruments in this country was at the lowest ebb at which it had been for many years.

To the credit of the American surgical instrument dealers, both wholesale and retail, it must be said that they did not immediately take advantage of the situation and raise the prices on the stocks which were still on hand, but did this only after many months, when they realized that the war would be a long one and that they would not be able to replace the goods which they sold, no matter what price they might be willing to pay.

From that time on, imported goods still procurable naturally commanded a higher price, and the prices advanced in ratio with the diminishing supply. It was only natural that the American manufacturer of steel surgical instruments, who, as previously stated, had just gone through a most disheartening experience in the way of losing the reasonable protection that his industry had been accorded, was at first rather loath to again make an effort to build up the trade, not knowing how soon the war would be over, at which time he would again be at the mercy of foreign competition. As soon as the situation became more acute, however, the older manufacturers in this country, as well as a number of new ones, again took up the production of steel instruments in quantities. In order to do this, however, many new machines and dies had to be secured, and as the demand for skilled labor for making dies and machinery, as well as competent help to finish the surgical instruments, was out of proportion to the supply, it is only natural that the finished product had to be marketed at a considerably higher price than the imported goods, or even the goods that had been previously manufactured in this country.

The accusation, therefore, which one so often hears from surgeons and hospital men, that they are being greatly overcharged in their purchases of surgical instruments and equipment, is grossly unjust, and if we will only compare the increase in cost of other necessities used in a hospital, the production of which in many instances does not even require the help of highly skilled labor, we will find that the increase in the cost of instruments and equipment is far below that of other items.

One of the great difficulties manufacturers of instruments have had and still have to contend with is that as soon as they have some new men

broken in (at their own expense) to do fairly good work, along come labor agents from the more profitable trades and make to these men tempting offers in the way of pay which the manufacturers of instruments cannot meet, and then they have to go all over the same ground again with the next man they may be able to secure. Yet regardless of all these difficulties, the American manufacturers have been able to speed up production to such an extent that with the help of some imports from Japan the dealers in surgical instruments have been able during the last few months to give their customers fairly prompt service.

Something should be said about the surgical instruments which are now imported from Japan. Some of these are of a rather poor quality. The Japanese instrument manufacturer or broker (with whom one has to deal mostly) is a very obliging gentleman. He will furnish instruments to you at any price whatsoever that you are willing to pay. If you tell him that you want 10 gross of a certain forceps, but that you do not want to pay more than $9 a dozen for them he will say, "Very well, sir, we make them for $9 a dozen," and if you tell him that you want the same type of instruments, but that they must be of first-class quality, and that you are willing to pay as much as $18 a dozen for them, he will also agree to make them at that price.

The demands for surgical instruments upon Japan are tremendous at this time. After catering to the home market, the Japanese completely supply the needs of Russia, China, Italy, as well as furnishing many items for England, France and other countries now at war with the Central Powers, the manufacturers of which had, before the war, supplied surgical instruments to all these countries, to the extent of from 50 to 80 percent of their entire requirements.

This simply means that especially at the present time, with this abnormal demand, first-class goods command a good price, even in Japan, and, when instruments are offered at a very cheap price, one should be on his guard as to what one is going to get for his money. The fact is, the prices on instruments from Japan have gone up repeatedly during the last year, so that today, after duty, charges, war insurance, etc., are added, first-class surgical instruments made in Japan cannot be sold much cheaper, if any, than a similar grade of instruments made in this country.

Surgical needles are more scarce at the present time than anything else that is used in hospital work. This especially refers to the more popular types, such as Mayo's, Ferguson's, Murphy's intestinal, etc., and in these it is the medium sizes that cannot be had. Some of the smaller and larger sizes are still obtainable, of course, at advanced prices. Many dealers have an extensive stock of surgical needles of various types which would probably do the work as well as the special patterns which each individual surgeon seems to feel he must have, and consequently insists that nothing else will do. It would greatly improve the situation all around if surgeons would adapt themselves a little more to existing conditions and try to use the next best needle obtainable, instead of promptly returning substitutes (often with sarcastic comment) which have been procured by his dealer and sent to him with the best of intentions.

Surgeons' needles have always been imported from England and Germany. The German supply, as is well known, has been cut off for over two years and only very small quantities can occasionally be secured from England.

An American firm has lately started to manufacture surgical needles, but it will be a very long time before they will be able to fill the demand.

Owing to the entrance of our country into the war, the demand for surgical requirements has become greater than ever. The army and navy medical supply departments have recently placed contracts with our manufacturers for sufficient instruments, x-ray, operating room and general hospital equipment to take care of an army of approximately a million men and this equipment must be delivered within a specified time. As practically all of our manufacturers were informed some weeks beforehand what would be expected of them, they have made extensive preparations in anticipation and there is no doubt but that the equipment will be delivered within the time limit. As the government only requires certain types of instruments and equipment, we are firmly convinced that, owing to the great effort the manufacturers are making to increase their output and with the help of the imports from the Orient, they will be able to furnish, in addition to the requirements of the army and navy, enough goods to carry the surgical profession and the hospitals over the next few critical months.

I have taken this matter up with the principal manufacturers of hospital furniture and x-ray equipment, and practically all of them state that if only the hospital people will help them by confining their wants to the standard patterns for the time being and not insist on specially designed apparatus and also anticipate their wants for the larger equipment from 60 to 90 days ahead.

they feel sure that they will be able to take care of everybody's needs.

I am extremely sorry, however, that I cannot hold out any hope as regards lower prices in the near future on either instruments or equipment. It is a well-known fact that skilled labor is more in demand than ever, especially in all of the metal-working trades, and the scarcity will be even more felt after many of these men have been called to the colors. Material of every kind is scarce and commands formerly unheard-of prices, consequently all of the information that I have been able to secure points to the fact that we may expect another decided increase in prices, especially in those products in which material forms a great part of the original cost.

AN ARTIST'S WORK IN WAR ORTHOPEDICS

Miss Grace Gassette and Her Remarkable Work in Restoring to Wounded Soldiers the Use of Their Limbs—American Woman Called Into Consultation by Foremost Surgeons of Paris

By FANNY B. LESTER, Chicago

THE French Government has shown its appreciation of the great service rendered by Miss Grace Gassette, of Chicago, to the suffering and crippled soldiers of France by conferring upon her *la Croix de Chevalier de la Legion d'Honneur*, the medal which Napoleon I established. This is the highest honor ever bestowed for military or civil service. Miss Gassette is an artist of ability. She has resided in Paris for twenty years. Undoubtedly her thorough knowledge of anatomy acquired in her art work laid the foundation for this creative work that she is now doing in the line of corrective surgical appliances. At the beginning of the war, she and other American women in Paris gave their services in the surgical dressing room of the American Ambulance at Neuilly, France. For twenty-six months she superintended this department.

Photograph by Matzene, Chicago.

Fig. 1. Miss Grace Gassette, the American artist who has recently received the cross of the Legion of Honor because of her work in the creation of mechanical appliances for the correction of the afflictions of wounded soldiers. Miss Gassette and Mrs. Edith Wharton (who also has been prominent in the work of war relief in France) are the first two American women to receive the decoration of the Legion of Honor since the beginning of the war.

In the surgical work of the ambulance it was soon discovered that the ordinary orthopedic appliances would not serve for the extraordinary fractures of battle, and then it was that Miss Gassette began to invent simple devices to aid the surgeons. These devices held the limbs in position so that the wounds could be drained and amputation avoided. The appliances were so successful that other surgeons and other hospitals wanted them. The demand became so insistent that a special committee to carry on this work was organized, called "The Franco-American Corrective Surgical Appliance Committee," and Miss Gassette resigned from the ambulance and became "directrice technique" of the new work. Skilled workmen could not be secured, so locksmiths and carpenters were pressed into the service and trained. A young sculptor was found to do the modeling. The shop and clinic opened September, 1916, in the studios of two artists. Three men, a boy and two sewing women, were the paid workers. All of the other help is voluntary, including the use of three automobiles, an auto-truck, and their drivers. "The government is now furnishing the gasoline to run them, which helps wonderfully, as it is hard to get and is so high."

The money to finance the work has been given by the committee, by interested friends in the United States, not a few of whom are Chicagoans. From October 20 to November 28, 550 appliances of sixty different kinds were distributed to hospitals and individuals.

Twenty-six hospitals have been served, and the list is growing. Within a month the ministry of war (French) has ordered 1,000 splints. One surgeon said, "With Dr. Carrel's solution and Miss Gassett's splints we can save many limbs that would otherwise be amputated." The surgeons are introducing them as fast as they can be produced. Two additional rooms for the shop have had to be secured, in the same street (17 rue Boissonade).

Fig. 2. Miss Gassette (on the right) at the door of Mrs. Depew's hospital, then (September, 1916) three miles from the German lines. On the left is Miss Edwards of Pittsburgh, who has given generously to the work of Miss Gassette's committee. In the center is the commandant communal.

A daily clinic cares for men who have been discharged from the hospital but need special help. Miss Gassette writes:

"The best testimonials come from the men who are helped. It would do your heart good could you see their happy faces, when they find their helpless arms and legs restored. One poor fellow with two broken vertebræ had been helpless for months, most of the time in a plaster cast so heavy that he could not walk. For him I made an aluminum corset well padded inside. The first day he wore it he walked about normally, as happy as a child. Another man was wounded in the neck in such a way as to draw his head down toward his shoulder, where it was held by the tightened cords at an angle of about 20 degrees. A simple invention was put on which he has worn for several weeks; the deflection is now only about 85 degrees. This result was secured by a gradual pushing, the appliance regulated by a system of screws. His neck will soon be straight. The treatment he had had was a pulling process, very painful and unsuccessful. So many of these devices are restoring crippled hands, generally the right hand. Here the need is appalling.

"One of the U. S. navy officers came to the shop and has repeated his visit several times. He says all of these cases should be written up, for they will be of practical interest to the surgical world."

The following letter, written without thought of publication by Miss Gassette to one of the friends in Chicago who have been exceedingly helpful in sustaining her work by supplying the means to carry it on, gives a most interesting picture of her methods and their results:

"PARIS, March 31, 1917.

"*My dear Mrs.* ——:

"Your very good letter came today, and I thank you for all your kind thoughts so beautifully expressed. It is fine to have friends, and we all need them in these terrible times. We are entering upon our thirty-second month of war and America is still sending us money to help. I have turned over your check to my committee, for that is the work nearest my heart, the work which gives results each day. The money that you have sent me will supply seven men who have to have the most complicated kind of appliances, which I make out of just the best material that I can buy so as to last them just as long as possible. I show them how they are made and how they can be repaired at the lowest cost possible. Did the instrument-makers make this kind of appliance, they would cost anywhere from $50 to $60 apiece, so you see we are not at all extravagant.

"I did not realize that I was doing anything extraordinary until doctor after doctor told me, and the French doctors begged me to help them. At first I gave half of my time to this new work and half of my time to the American Ambulance. I decided to give all of my time to the French formations since November 6, when I left the American Ambulance. I have had a broader scope and have done things that I never could have done had I not been working with the biggest men in France. How I do what I do I do not know, but I just do it, and the doctors give me their cases with a free hand, and so far the results have been beyond the expectations of everyone. What I have done almost sounds like miracles. I never get used to it myself, as an American surgeon who is here for our government told me today after he had passed his morning in my clinic, 'You will pass the rest of your life as an orthopedic consultant.' Everyone tells me that my methods are entirely new.

"I cannot tell you what I will do, but I can tell you what I have done and tell you about my men. I love them and they are fine, everyone of them. I guess that it is because I love them that I find a way to help them. My heart is full tonight, for I have made six men happy today. I

will tell you about these. I started my work at 9:30, as usual, and found three men waiting for me. I expected a quiet day, for I had two complicated fittings, and I always do the fittings myself. Well, I took the first one; he came to me two weeks ago—heard of me from a friend. He was a poor fellow, honorably discharged eight months ago, as a confirmed cripple. A ball had entered his back and came out of his thigh, cutting his sciatic nerve. He was on two crutches and his foot turned at almost a right angle at the ankle. The whole posterior aera of his foot and leg below the knee was so sensitive that he could not bear the light weight of his fingers. I examined him carefully, and decided that the case was not so hopeless as his

Fig. 3. Gassette hammock suspension, applied for compound fracture of femur, upper third.

papers indicated. I bound cotton about his foot until I could touch it without pain and then tried very gently to straighten it. When I had it almost straight, he said it felt better than it had in a year, so I bent an iron and incorporated it in plaster bandages, putting the leg into as good position as I could; I was so afraid that I might produce a pressure sore that I told him to return in three days, which he did. When he came he said, 'Mademoiselle, I moved my big toe this morning for the first time.' I had left his toes out of the plaster expressly to see if there was any sensation of motion. When he told me this then I knew that my first impression was correct; that there was a little life in the nerve. I took off the plaster, expecting to arrange it so as to buckle it on again. I found that I really had put the plaster on in sufficient extension so as to relieve the pressure on the nerve at the knee. All the sensitiveness in the foot had disappeared. I could handle it easily without pain, so I then strapped the foot as straight as I could with adhesive plaster. I made him a brace which I use for the sciatic cases, which are the worst, and today I put it on him and he walked without crutches, and, best of all, he could bend his instep slightly. Tears came into his eyes, and he said, 'Mademoiselle, every doctor has told me that I would have to walk on crutches the rest of my life.' His papers showed that his case had continually been marked hopeless. I gave him a cane, for I was afraid that he might overdo, and he left me with his crutches swung over his shoulder. The last thing he said to me was, 'Mademoiselle, it is a miracle, I cannot believe it is I.' He is going home for a visit to his sister and then will return to a school, where he is learning a new trade.

"Isn't that worth getting tired and everything else? I think it is. The next case was another man from the same school. He, too, had a sciatic paralysis, but not so bad a case. He came on one cane and left with his cane over his shoulder, he, too, walking straight. My next case was that of a man with a part of the humerus gone close to the elbow joint. He is a patient of Professor Walthers. I gave him his first appliance to break the ankylosis in the elbow January 22. Today I put on a final appliance. He had good functioning of his forearm, and Dr. Walther said to make a bone graft would not be successful, and if Dr. Walther says so, I guess it is so. Well, my appliance gives my man every motion of the arm. He, too, is happy, and Dr. Walther is going to present the case to the Paris Surgical Society upon Wednesday of next week. I have over fifty of Walther's cases under treatment.

"My next case was a captain belonging to one of the best families in France. He heard of me, and came. He had a dislocated shoulder and a fracture which was treated at the front for a simple dislocation, so that a big callous formed and he could not move his arm at all, and to add to his troubles, he had neuritis. I have had him six weeks and he can get his hand to his face, and can shave and feed himself. I will get him fixed in time. His doctors are now sending me other cases. After him came a case of Professor Babinsky's, one that I asked for one day when I was at the clinic in consultation. Isn't it funny for me

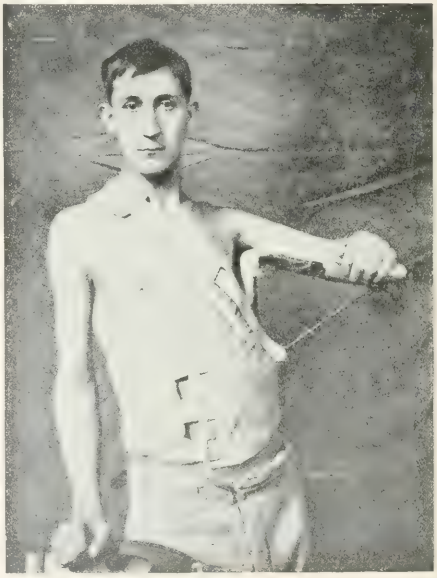


Fig. 4. Wing support for ununited fracture of humerus (Gassette apparatus).

to be called in consultation with professors, men whose opinions decide things? I think it is. I had gone to see a scoliosis, which I have not started on yet. I am waiting for two x-rays to be taken in different positions. The smile of the man interested me and I asked the doctor what his case was. He said that the patient had a paralysis of the brachial plexus, but the important thing up to date had been to save his eyesight; that an abscess had formed in the head, back of the ear, and they had had to trepan him; that he was getting better, and that they would take up the brachial plexus next, as you know Babinsky's clinic is nerves. I examined the man and I asked the doctor to let me work upon him, and see if I could do something for

him, so he said yes. Poor fellow, he was in a pitiful condition; had had no use of any of the muscles of his arm for five months. Well, that was a week ago. I made a support for his arm so as to relieve the weight of it from his neck. Then he came to me for treatment. That was day before yesterday. Today when he came he said very timidly, 'Look, mademoiselle, I can move two fingers.' I said, 'Did you tell Dr. Dubois?' He is Babinsky's first assistant and a stanch friend of my methods. He said 'yes.' I asked him what Dubois said and he said Dr. Bubois smiled and said, 'You stick to Mlle. Gassette.'

Fig. 5. Gassette hammock suspension, used for compound fracture of femur.

"My next case was one of Professor Quénu's. He had a resected shoulder, with loss of bone 2½ inches. Well, in two months I have increased his muscles to double their force, and he can raise his arm and has all freedom of motion.

"Then there were two other men; one, who had a total radial paralysis, could not bend his fingers. He can now carry a pail with 10 liters (about 10 quarts) in it, and is getting on better and better. When the curator of the museum where he works saw his appliance he asked him where he got it and he told him. He came to see me and he is a doctor, and the next day his surgeon came to see me and they asked me to go to their hospital. I examined five men and can help them all. I could go on all night and tell you of my men, but this will give you an idea of how your money is going to be spent. Captain Raoul Duval said today, 'You will have an army of grateful men after this war.'

"I have good friends and I will enclose a copy of a letter which I received from Justin Godart, assistant secretary of state for the army medical service, after his official visit. Both Mme. Poincaré and Mme. Waldeck Rousseau have been good friends to me. I think that I have had more privileges than any other American woman over here, but then I never ask to do anything unless it is to help. I have no curiosity about trenches, etc. I have not written of what I have done and seen at the front, for I want to help, and I might do a lot of harm by talking; but after the war I think that I can write some very interesting experiences.

"Last November the *Military Surgeon* in Washington published an article of mine, and now, commencing about June, they will have something every month. They have asked me to give them anything that I can.

"My work is what is called laboratory or research work. I have hopes that some of the medical schools at home will give me a little fund to help this branch of it. It will be too bad if some school does not have my matter, for Val-de-Grace Military Hospital here has asked through the ministry for complete copies of my records. I keep full medical records, photographs, x-rays and drawings. M. Godart said that they were the most complete records that he had seen.

"Our money has all come from America and mostly from my friends, and I am pleased, especially so as nearly every bit of it is from Chicago.

"You will notice upon the enclosed circular that I have a representative from the government; we are the only organization that has. My workmen are all mobilized soldiers. Our materials we have to get from the government, as they have the control of all metals, etc., so we get it at cost price.

"Besides the clinical work, we make and supply free all kinds of appliances, which I have worked out for hospital use. Since we started in the fall we have supplied fifty hospitals, two in Roumania run by the French, and yesterday they came for a big hospital in Saloniki. We have not advertised our wares, fearing that we might run short of funds. We get our best advertising from one doctor to another, and from one man to another. So many doctors say to me, 'Why do you not let it be generally known what you are doing?' Sometimes I worry for fear our money will give out, for we spend $2,000 a month as it is, but then we have given out over 6,000 pieces of appliance, and have about 5,000 on hand ready for the offensive, which has commenced, but which so far has not caused many wounded on our side, so that the rear hospitals are empty. In any event, we are doing our best. GRACE GASSETTE."

Such help as this not only gives relief to the suffering men, but it brings new hope into their lives when they find they can take their places again in the ranks of usefulness. Many of these appliances only cost from 5 to 30 francs each. The good that this committee can do is limited only by the means to carry it on.

—

Minnesota Sanatorium Association Meeting

The second semi-annual meeting of the Minnesota Sanatorium Association, held July 10 at the St. Paul Hotel, like the meeting six months ago, was largely attended.

To meet a request from the War Department for twelve tuberculosis experts to assist the regular army officers at Fort Snelling, Fort Chickamauga, and Fort Riley, a committee consisting of the following was designated: Drs. A. T. Laird, George W. Beach, and I. J. Murphy.

The meeting was attended by twenty-four physicians from state sanatorium boards, also all attending physicians of the various county sanatoria, members of the advisory commission and several public health nurses.

Addresses were given by the following physicians: George W. Beach, State Sanatorium, Walker; F. S. Bissell, University Hospital; Robinson Bosworth, secretary of the Advisory Commission; and L. E. Sutton, attending physician at Mineral Springs and Buena Vista Sanatoria.

You can usually locate the best apple tree in the orchard by the clubs under it.—James G. Blaine.

GRAPE JUICE, LIME JUICE, AND LOGANBERRY JUICE

Fruits and Their Juices Valuable for Sweetness and Flavor Rather Than for Nutrition—Nutrients Chiefly Sugar—Importance of Mineral Constituents—Question of Preservatives

By JOHN PHILLIPS STREET, Chemist Connecticut Agricultural Experiment Station, New Haven, Conn.

IN general we consume fruits and their juices more for their sweetness and flavor than for the nutriment they supply. The only nutrients of importance in fruits are the carbohydrates, about three-fourths of these as a rule being sugar in some form. Levulose (fruit sugar) is the characteristic sugar present, but certain fruits, such as apples, apricots, and pineapples, sometimes also contain considerable amounts of cane sugar. The total sugars present in fruits range from about 1.5 percent in lemons to 16 or 17 percent in grapes. The non-sugar carbohydrates are chiefly gums, most of which are of the nature of pectins. While these pectins in certain cases may be partially converted into pentose sugars during the ripening process, the nutritive value of the pentoses is probably small. It is the pectin, however, that gives to certain fruits their jellying power, a property taken advantage of by the maker of jellies and preserves. Certain fruits contain appreciable amounts of cellulose, whortleberries, figs, and raspberries showing the highest percentages among the more common fruits.

The mineral constituents of fruits are of importance, and by some authorities are deemed of almost as much value as the actual nutriment of the fruit. Potash is the most abundant mineral element present and is generally combined with an organic acid, such as tartaric acid in grapes, malic acid in apples, and citric acid in lemons and limes. The combustion processes of the body convert these acids into carbonates, thus assisting in making the blood more alkaline and the urine less acid. In certain diseases, such as scurvy, these fruit acids are of decided therapeutic value. During the ripening process the amount of organic acid in the fruit dimishes, and this fact, together with the formation of an increased amount of sugar, accounts for the greater sweetness of the more mature fruit.

The odor and flavor of fruits are due to various ethereal compounds, the fruit ethers, which are present in various combinations and generally in quite small amounts. Although devoid of nutriment value, these natural flavors doubtless act as appetite stimulants and to some extent assist digestion.

GRAPE JUICE

As already stated, the grape is relatively high in its sugar content. This fact gives the grape considerable nutritive value, and the organic acids it contains, chiefly tartaric, act as a mild laxative and diuretic, at the same time reducing urine acidity. While doubtless the therapeutic effects of grape juice are considerably exaggerated, it is nevertheless obvious that its constituents are by no means to be ignored from either a dietetic or a therapeutic standpoint. Furthermore, in these days of constantly increasing prohibition tendencies, the use of unfermented grape juice as a refreshing beverage is becoming more and more general. Consequently we find numerous commercial brands of grape juice of varying quality on the market.

TABLE I.—ANALYSES OF COMMERCIAL GRAPE JUICES

	Solids	Tartaric acid		Solids	Tartaric acid
A. and P.*	14.80	0.71	National	32.73	1.03
Armour's*	17.14	1.05	Noyes' Ontario	15.77	1.02
Armour's Top Notch	14.51	0.93	Paw Paw*	16.14	0.74
Bass Island	16.79	1.15	Randall's Carbo-Grapo*	14.50	0.28
Duffy's*	17.02	1.05	Randall's Gold Medal*	26.22	1.03
Duffy's	15.37	1.07	Randall's Gold Medal	15.37	0.94
Fenner's*	16.63	0.79	Red Wing	17.50	1.01
Fremont	13.99	1.08	Ritter's*	23.11	0.84
Gely's	16.59	1.37	Royal Purple	15.02	1.00
Gleason's*	16.31	0.91	Schuhle's*	13.21	0.82
Howland's*	17.53	0.98	Schuhle's	16.62	0.93
Imperial (Hager's)	17.84	0.94	Shirriff's	17.44	0.83
Imperial (St. David's)	11.03	0.51	Sterling	31.83	0.82
Lake Erie*	18.94	1.01	Vineland*	20.49	0.96
La Société Anonyme	18.55	0.50	Vineland	17.68	0.85
Liggett's	15.13	0.86	Walker's*	15.92	1.13
McLaughlin's	19.58	1.44	Walker's	14.84	1.20
Mellen's*	17.31	1.17	Welch's*	14.93	1.27
Naboth*	20.85	1.17	Welch's	16.13	1.15

*Analyzed by writer; other analyses by Canada Inland Revenue Department.

Table I gives partial analyses of a number of these juices examined either in my laboratory or in that of the Canada Inland Revenue Department.

For practical purposes the solids may be considered as being almost entirely sugar, in genuine grape juices, the sugar being mainly levulose, or invert sugar. Even in juices fortified with cane sugar but little of this sugar will be found as such in the juice, the organic acids present being sufficient to convert most of it into invert sugar.

Owing to the variability in the composition of the different varieties of grapes, due to varietal, climatic, and seasonal conditions, it is somewhat difficult to establish a standard for the commercial juice. However, the Canadian standard appears reasonable and is of quite general application. This standard states that the acidity of grape

juice, calculated as tartaric acid, should range between 1.0 and 1.5 percent, and that if the solids much exceed 15 percent sugar has probably been added. It is obvious, therefore, that certain brands listed in the table contain added sugars, and in a few cases, at least, the tartaric acid percentage is far too low for a genuine grape juice.

Aside from the addition of sugar to give body to an otherwise weak juice, probably the most common form of adulteration is the addition of water. A low solid content and acidity value would generally indicate this form of adulteration. In the past, salicylic acid was frequently found in grape juice as a preservative, and in rare cases coal-tar dyes were used. These forms of adulteration, however, at the present time have chiefly a historic interest.

LIME JUICE

Lime juice, the freshly expressed juice of the fruit of various species of the genus *Citrus*, is a very different product from grape juice. The genuine juice contains very little sugar of any kind, and the characteristic acid is citric instead of tartaric. In fact, nearly all of the solids of this juice exist as free citric acid.

In nine genuine samples of the juice McGill found the solids to range from 8.4 to 9.7 percent, average, 9.0 percent, and the citric acid from 7.4 to 8.8 percent, average, 8.0 percent. Similarly Lythgoe found an average of 8.7 percent solids and 7.2 percent citric acid in eight genuine juices. Accordingly the Canadian authorities adopted a standard requiring a minimum of 8 percent solids and 7 percent free citric acid.

TABLE II.—ANALYSES OF COMMERCIAL LIME JUICES

	Solids	Citric acid	Preservative
Blackwood's	8.8	7.6	Salicylic acid
Dalton's	7.2	7.1	
Dominica	10.6	8.1	Benzoic acid
Eaton's	8.7	6.9	Salicylic acid
Great Auk's Head	8.3	7.6	Salicylic acid
Hedley's*	8.3	7.9	Sulphurous acid
Howard's	6.7	6.6	
Kovah	7.1	6.8	Salicylic acid
Maple Leaf		7.5	Salicylic acid
Montserrat	9.2	8.0	
Nabob	8.3	7.6	None, or sulphurous acid
Olympia	7.8	7.3	Benzoic acid, none
Rose's	8.6	7.9	Benzoic acid, none, or sulphurous acid
Rose's*	8.0	7.6	Sulphurous acid
Rowat's Thistle	11.0	8.2	Salicylic acid
Rowat's Thistle*	8.3	7.7	None
Royal		6.9	
Royal Crest	9.3	8.4	
Sovereign	8.0	7.2	Salicylic acid, benzoic acid, none, or sulphurous acid
Sterling	7.3	6.8	Benzoic acid, salicylic acid, or none
Stone's	8.2	7.3	
Stone's*	8.5	7.4	Sulphurous acid
Stower's	7.8	7.0	Salicylic acid, or none
Victor*	7.8	7.4	Benzoic acid
Victoria Cross	9.3	7.7	Sulphurous acid
White Star	7.9	6.9	Salicylic acid
Yacht Club	8.0	7.3	

*Analyzed by writer; others analyzed by Canada Inland Revenue Department.

Table II gives the analyses of a number of commercial brands made by McGill and myself. While the table contains a few brands of doubtful genuineness, whose relatively low solids suggest the addition of water, these analyses may be considered as typical of standard lime juices.

Lime juice has been, and to some extent still is, grossly adulterated. The commonest adulterant is water, while artificial color, tartaric acid, glucose and other sugars have been found in many brands. McGill has found a product sold as lime juice which was simply an aqueous solution of tartaric acid colored with a coal-tar dye. I have found one brand containing only 2.8 percent of solids, the label frankly stating that the product was two-thirds water and one-third lime juice. Another brand I found to be lime juice and water in equal proportions. It is apparent, therefore, that a careful scrutiny of the label is necessary when purchasing this product.

The question of preservatives in lime juice is a rather difficult one. These are quite commonly used, and it has frequently been claimed that their use is necessary. The fact, however, that certain well-known and very popular brands are put up without any preservative raises some doubt as to the accuracy of the claim for its necessity. A study of analyses of the same brands of lime juice during a period of several years shows considerable variability in the kind of preservative used. Originally salicylic acid was the most popular, later shifting to benzoic acid or sodium benzoate, while at the present time sulphurous acid is the most widely used. The column in the table marked "Preservative" shows this variability in certain brands in the order of the usage.

LOGANBERRY JUICE, "PHEZ"

This product, only recently introduced in the market, is now being extensively advertised, and it is of interest to point out its composition. The product is also worthy of special attention, as it is an excellent example of the development of an entirely new food simply by American patience and ingenuity. In 1881, J. H. Logan, of Santa Cruz, Cal., succeeded in crossing the native wild blackberry and the raspberry, the resultant fruit being a large berry shaped like the mammoth blackberry, but colored a deeper red than the raspberry, and possessing a very distinctive tang and flavor. Phez is one of the results of this successful breeding experiment, and is the trade-mark of the Pheasant brand of loganberry juice, produced in the state of Oregon. It consists of the pure juice of the loganberry fortified with sufficient cane sugar to render it sweet enough as a beverage for the average palate. Its color is

natural and it contains no chemical preservative or alcohol.

I am familiar with but two analyses of this product, one made by the Columbus Laboratories of Chicago and one by himself, the former being somewhat the more complete. These are given in Table III.

TABLE III.—ANALYSES OF PHEZ

	Columbus Laboratories	Connecticut
Specific gravity at 15.6° C.	1.1525	1.1516
Solids	34.25	34.13
Reducing sugars, as invert	16.10	17.87
Cane sugar	14.80	13.48
Citric acid	1.32	*
Malic acid	0.47	*
Pectose, color, etc.	1.07	*
Protein	0.20	*
Ash	0.29	*
Preservatives	....	none
Color	natural	natural
Alcohol	none	none

*Not determined.

One pint of the juice contains 126 grains of fruit acids, chiefly citric, and the equivalent of 6 ounces of cane sugar. It would seem that Phez is a valuable addition to the list of our healthful, nutritious and palatable non-alcoholic beverages.

Addendum to Paper on Flavoring Extracts in July Number

Since preparing the paper on "Flavoring Extracts," published in the July number of THE MODERN HOSPITAL, I have examined a series of extracts put out by the Calumet Tea and Coffee Company, of Chicago, under the name Ariston. I am informed that these extracts are widely used by hospitals, and therefore my analyses may be of interest to MODERN HOSPITAL readers. The analyses indicate that these extracts are preparations of high quality.

Vanilla. Alcohol by volume, 39.75; vanillin, 0.20; coumarin, none; color, natural.

Ginger. Alcohol by volume, 89.50; solids, 0.99; solids soluble in 95 percent alcohol, 0.93; solids soluble in water, 0.09.

Lemon. Alcohol by volume, 83.17; lemon oil, 5.40; color, natural.

Orange. Alcohol by volume, 87.45; orange oil, 4.96; color natural.

Clove. Alcohol by volume, 89.56; clove oil, 2.95; color, natural.

Wintergreen. Alcohol by volume, 88.87; oil, 2.94; color, natural.

Peppermint. Alcohol by volume, 91.05; peppermint oil, 3.2; color, natural.

Almond. Alcohol by volume, 92.52; almond oil, 1.16; color, natural.

Celery. Alcohol by volume, 92.55; oil of celery seed, 0.62; color, natural.

THE SANATORIUM BLANKET PROBLEM

Importance of the Blanket Question in a Tuberculosis Sanatorium—Allowance of Blankets for Each Patient—Standard Size and Weight—Method of Making Up the Bed—Grading of Used Blankets—Proper Method of Cleaning and Disinfecting

By H. L. ROCKWOOD, M. D., Warrensville, Ohio, Medical Director of the Warrensville Tuberculosis Sanatorium of the City of Cleveland

THE blanket equipment of a tuberculosis sanatorium requires more careful attention than might at first thought seem necessary. If one will consider the usual requirements of the routine treatment of tuberculosis as conducted in the constantly increasing number of tuberculosis sanatoriums, it will at once be appreciated that blankets form an almost indispensable part of the sanatorium bed outfit. No single component of the average sanatorium bed requires more financial outlay, and no greater sin against economical and sanitary operation of such institutions can be committed than to neglect to handle the supply of blankets properly.

The routine therapeutic procedures in tuberculosis demand that patients be kept in the outdoor air a maximum amount of time night and day the year around. When the sanatorium beds are located in rooms, the windows are wide open, and when, as is more commonly the case, the beds are located on verandas or porches, there is no protection from weather except the roof and possibly wind or rain shields, save that furnished by the bed coverings. From the patients' point of view, physical discomfort under such conditions can be avoided only by an abundant supply of serviceable blankets. It might further be said that therapeutic gains will be slight if patients are allowed to suffer from cold or exposure when "taking the cure" at sanatoriums.

There is, of course, a great variation in the specific blanket requirements at differently located institutions. Climatic conditions may reduce or increase the number required per patient. At the Cleveland municipal sanatorium located at Warrensville, Ohio, a long, cold winter season is the rule, and in addition we are subject to rather severe cold winds from Lake Erie. Our beds are of the usual metal tubing type, white enameled, 3 feet wide, 6½ feet long, with springs of woven wire resting 36 inches from the floor. We use a rather thick cotton felt mattress. The blanket we have found most serviceable for such conditions is woolen, dark gray color, 66 inches wide and 78 inches long, and known to the trade as a 5-pound blanket. As a matter of fact, the weight of a single blanket is usually 4½ pounds when new. Whether or not this weight is rapidly reduced by wear depends largely on how the blanket is handled.

We have found the so-called "single" blankets better than "double" ones. Nurses say that when

blankets are used so large as to require folding several times beds are much less easily made and kept fit for inspection than when "single" blankets are used. Furthermore, for the various physical conditions of patients encountered in an institution of 250 beds we find a "single" blanket better adapted, provided such blanket is of the width we are using. To make this clear, it should be stated that most patients habitually lie on that side of the body which they find more comfortable. On account of the condition of the lungs, it is frequently impossible for them to lie on either side with equal freedom from cough or breathing disturbances. This fact, as well as the frequent need of removing blankets when soiled by hemorrhage, sputum, or other excreta, makes it very undesirable to use blankets which on account of their size have one or more folds beneath the patient and the other folds over him.

It is the custom at Warrensville to allow five of the blankets we have described for the use of each patient, and it is usual to find that after a patient has been given instructions as to the most efficient way to arrange his blankets on reclining, this number is ample for all weather conditions. There are exceptions, to be sure, both in weather and in patients, but the greater number of our patients go through the winter without discomfort with this number of blankets at their disposal. It is a simple matter to discard one or more on warmer days or nights by folding the unused blankets neatly and placing them in the spaces between the ends of the bed and the mattress.

Just a word may be said in regard to the proper way to make up the bed. One blanket at least should be beneath the patient; whether on the mattress or with a sheet between it and the mattress depends on the personal wishes of the patient. For sanitary reasons we prefer to have patients lie between sheets with the blankets outside, but we allow patients to lie directly between the blankets if they prefer. The edges of all blankets are not allowed to hang over the sides of the bed. It is better to turn them back on top of the mattress at the foot of the bed as well as on the sides. In this way the blankets make a kind of pouch in which the patient inserts himself, keeping out on all sides the entrance of cold air. In this way, with the aid of a foot-warmer and one of the various kinds of head caps which protect the head and neck, almost any kind of cold weather can be endured with no discomfort.

When the blankets are all new there is, of course, no choice, all being the same, but after some become worn by use and further supplies of new blankets are added, it becomes necessary to grade them all, and when the blankets are given out to patients each patient should receive an equal number of each grade. We have systematized this by having three grades. The average length of life for the blanket we use is not more than three years when kept constantly in service, and for practical purposes we designate as No. 1 blankets those in their first season or new. No. 2 blankets are those which have already been used one season, and the No. 3 blankets represent all others in use. After the cold season each year all blankets are inspected, as will be described later, and at this time the stock of No. 3 blankets is reduced to those only which are serviceable for another season, all the others of this grade going into the discard to be used for cleaning purposes or for various other purposes, such as cutting into strips for wrapping the foot-warmers with which each patient is provided.

For identification purposes it is customary to number all blankets used. There is a patent brass tag in the market used by laundries chiefly for marking such articles as overalls or anything which cannot be easily marked with ink. This tag is well adapted to marking blankets by number. The tags may be purchased numbered in rotation, or blank tags may be secured and the number put on with a set of steel numbering dies. The number tag is placed in the corner of the blanket and serves several purposes. When blankets are given out for use, the number on the tag is noted in the blanket record book, and each patient is charged thereby with the blankets he is to use while at the institution. It is unnecessary to remove the tags when washing or sterilizing the blankets, and, in fact, it is difficult to remove them after they are once properly applied. Some institutions number their blankets with white indelible ink by means of a brass stencil and brush. Others simply sew on numbered tags. By reference to the blanket record book at any time it may be ascertained to which patient or ward a particular blanket belongs, and by recording in the record book the date when the blanket is put into use the number assigned gives a convenient means of checking the amount of service any particular lot of blankets has given. Such information is of use in placing new orders for blankets and in detecting careless handling in the laundry or other parts of the institution.

The cleansing of a woolen blanket infected with tuberculosis bacilli or other pathogenic organisms is an extremely important matter. No woolen blanket will stand boiling. Shrinkage alone would make this an undesirable method. At Warrensville, immediately on the discharge of a patient or at other times when blankets require cleansing, they are sent from the wards to the sterilizing

room in cotton bags. In the sterilizing room is a large rectangular steam sterilizer of the type commonly used for sterilizing mattresses and bedding. On the car which enters the sterilizer the blankets are spread in such a way as not to allow the edges to overhang the car and thus come in contact with the walls of the sterilizer, otherwise scorching is apt to occur. It should be stated that employees are instructed, when handling such contaminated bedding, to protect themselves by wearing face masks and washable clothing. Before running the sterilizer car into the sterilizer, steam at not less than 15 pounds' pressure is allowed to enter the outer jacket surrounding the sterilizing chamber, and thus surround the chamber with heat until the air in the chamber itself is well warmed with the doors of the sterilizer left open. The blanket-laden car is then pushed into the sterilizing chamber and the doors made steam-tight after closing. Live steam is then allowed to enter the chamber, coming into direct contact with the blankets. Sterilization in this manner is accomplished in thirty minutes.

The procedure for removing blankets after sterilization is very important, for, unless this is done carefully, the blankets will be found drenched with condensation water. After sterilization, the steam entering the chamber is first shut off and the escape valve opened, allowing the steam in the chamber to pass out. This is done before opening the doors and with the steam turned on in the jacket surrounding the chamber. The doors are now gradually opened at the opposite end of the sterilizer from which the blankets were inserted and in an adjoining room, the sterilizer being so located as to pass through the wall of the room having one end in one room for receiving the contaminated material for sterilization, and the opposite end in the adjoining room for removing the contents of the sterilizer without running risk of recontamination from material in the room awaiting sterilization. The blanket car is now rolled out and the blankets removed and hung up for cooling.

After sterilization we usually wash out blankets in lukewarm water and dry by the centrifugal driers of the laundry. When, however, a blanket shows no evidence of being soiled it is our custom to avoid using water when possible, and it often serves all practical purposes to "dry-clean" blankets with brushes when spread on the lawn outside during blanket inspection days.

For inspection and grading of blankets we select a bright, sunny day and spread them out on the lawn where the sun will reach them all day. Starting in the morning, the blankets are left for several hours and then turned over and left till afternoon. They are then inspected and graded, brushed, folded, and taken to the blanket store rooms. These store rooms are used exclusively for blanket storage. The blanket record book is written up, showing the grade of each blanket by number at the time of inspection, and where each blanket is stored if not in use. If a blanket is discarded a new one is requisitioned from the general stock and given the number of the blanket which it replaces, thus keeping the equipment up to the standard allowance of five blankets to each bed in the institution. During periods such as the summer months or when blankets are to be kept in storage for some length of time it is well to distribute moth balls freely in the stored blankets.

We believe that, handled as outlined, blankets can be kept serviceable for a maximum length of time, and especially we wish to emphasize the necessity for thorough sterilization by steam and sunlight for all blankets used about individuals affected with tuberculosis.

SAVING THE STEPS OF PUPIL NURSES

Loss to the Hospital Through Ill Health of Nurses—Labor-Saving Devices and Methods of Organization—The Problem of Serving Meals

"Every nurse off duty for illness is a loss to the hospital; every nurse who starts training and stops because of a breakdown in health is a loss; every nurse with broken arches, strained back or varicose veins is a loss," remarks Miss Bea W. Graves, writing in a recent number of the *Pacific Coast Journal of Nursing*. Each hospital, she says, has its own problem in saving steps and conserving the energy of pupil nurses and each must seek its own remedy. She mentions, however, a number of devices which have proved of value. In one hospital a nurse in serving three meals was obliged to walk 4,320 feet and 960 stair steps. Each patient's tray was carried separately. The purchase of a tray cart, consisting of two decks and holding eight regular trays and two medium ones, rendered the serving of ward trays far more expeditious and satisfactory.

In another very finely equipped hospital the diet kitchen was situated on the opposite side of the building from one wing of the hospital. The distance covered in serving and returning trays for meals was over two miles. The remedy for this was a dumbwaiter, trays to be served from the general kitchen below.

Another suggestion made is that nurses be trained to make their head save their heels. For instance, if a patient at the end of a corridor rings for a drink of water, it would be wise in the early part of the night to take a tray of several glasses and give a glass to each patient on the way, thus avoiding many later steps.

Again, arrangements should be made so that the nurse may sit down whenever possible; for instance, when preparing supplies, making charts and giving treatments which may just as well be given with the nurse sitting.

Sunshine is delicious, rain is refreshing, wind braces up, snow is exhilarating; there is really no such thing as bad weather—only different kinds of good weather.—Ruskin.

THE MARYLAND STATE HOSPITAL TRAIN

A Modern Hospital Train Given to the State of Maryland by Three Railroads—Trolley for Carrying Patients a Unique Feature—Complete and Elaborate

By D. Z. DUNOTT, M. D., Hillen Station, Baltimore, Chief Surgeon Western Maryland Railway Company

At a meeting held early in March by the Preparedness and Survey Commission appointed by the governor of the state of Maryland, it was suggested by Mr. Arthur W. Thompson, vice-president of the Baltimore & Ohio Railroad and a member of this commission, that a hospital train for the state of Maryland be organized. Mr. Carl R. Gray, chairman of the commission, who is also president of the Western Maryland Railway Company, immediately accepted this suggestion as a valuable one, and it was agreed that the Western Maryland Railway Company, the Baltimore & Ohio Railroad, and the Pennsylvania Railroad would each furnish a coach to be converted into hospital cars.

As chief surgeon of the Western Maryland Railway Company, I was ordered to take charge and create the hospital train at once. In short order the cars from the various railroads were sent to the Western Maryland shops at Union Bridge and the work commenced. The Western Maryland car is a steel under-swung, 60 feet from doorsill to doorsill; the Baltimore & Ohio and Pennsylvania cars are full steel, 70 feet from doorsill to doorsill. The first work was to build up the operating room, which was placed in the Western Maryland coach. Twenty-five feet of this car was partitioned off, having two wide swinging doors in the partition. The walls and ceiling were painted a soft gray and the appliances for the operating room assembled.

Fig. 1. Exterior of one of the cars composing the Maryland state hospital train.

As a result, the operating room is furnished with an operating table patterned after the one designed by John B. Murphy, table being bolted through the floor to the underframe to make it solid, a sterilizing plant, consisting of two 10-gallon water sterilizers, a large instrument sterilizer, a large dressing sterilizer, and one large utensil sterilizer. The sterilizing equipment is connected direct with the train steam line, underneath the car, so that steam can be turned into the sterilizers without heating the car. Large alcohol lamps are also carried, to be used for sterilizing in case steam is not available. Large cupboards are placed in the operating room for instruments and dressings. There are four electric fans, brilliant electric lights, surgical instrument and dressing carriage, felt-lined boxes for salt-solution flasks, of which there are twelve; Dakin solution, etc., a most complete complement of surgical instruments, and a most modern anesthetizing equipment. Two large additional water tanks are placed under the roof of this car for excess supply of water. The operating room as now equipped needs no apology.

Fig. 2. Operating room of the Maryland state hospital train.

The remaining 35 feet of this car contains seven standard white enamel hospital beds, one large cupboard for blankets, linen, etc., one toilet, one medicine closet over nurse's desk, one nurse's desk, and one patients' ice box.

The Baltimore & Ohio car contains seventeen beds, one large linen closet, one pantry containing ice box, washbasin and enclosed set of shelves, arranged especially to hold tumblers securely, one nurse's desk and medicine cabinet over nurse's desk. This car also has toilet and extra washbasin for patients.

The Pennsylvania car contains seventeen beds, pantry, and same equipment as the Baltimore & Ohio car, linen cupboard, and also nurse's desk and medicine cabinet.

Each car has a call-bell system, with indicator over nurse's desk, and push button at each bed. The call-bell system is so arranged as either to

ring a bell or to flash a red light, as may be desired by the nurse.

The electric lighting system of the train is elaborate and complete. The cars are equipped with independent generating system, with an electric train line with Gibbs connectors, so that, in case of failure of batteries in one car, by using the connectors the car can be lighted from batteries of one of the other cars. The electricity will be generated for the cars in each car, as the train is run, and, for such emergencies as may arise when the train is away from its base for some time and is not being moved, a gasoline engine with generator apparatus has been placed in the baggage car attached to the train and electricity can be stored by this head-end lighting system at convenience,

Fig. 3 (left). Patient being placed in the car on a stretcher by a chain lift. The same stretcher is used in the ambulance, and the patient is not moved from the time he is placed on it until he is placed in his bed or on the operating table, as the case may be.

Fig. 4 (right). Patient (still on the stretcher) being transferred from one car to the next by means of the trolley running through the train. The time required is twenty seconds. The same trolley carries food and trays from the dining car to each patient's bed.

always assuring ample lighting facilities. This will permit the electricity to be generated in the absence of the engine. The lighting system in each car is so arranged that lights work independently on push buttons, and you can obtain full lighting capacity of the car, a smaller number of lights if desired, and several of the lamps are arranged in each car with dimmer system, so that a very mild, soft light can be obtained when necessary. There are four electric fans for each patient car.

Each bed is furnished with one oilcloth sheet, ten sheets, the same number of pillow cases, one pair of fine gray blankets, four spreads. For patients, each bed has four nightshirts, towels and other essentials necessary for comfort and well-being of the patients. Hot-water bags, ice bags, and all other essentials that go to make a well-equipped hospital are found on this train.

The surgical dressings are made according to hospital standards, and the supply will be kept up by a class of volunteer workers.

The train also has as a part of its unit a baggage car, which not only carries the gasoline engine, but will also carry two Ford ambulances, each ambulance having capacity of four patients. The car has been so constructed that the ambulances will be loaded and unloaded from the end of the car. The baggage car has also been donated to the equipment by the Western Maryland Railway Company.

The train complete consists of an ambulance car, one combined operating room and patient car, two full hospital cars (capacity of patients for the three cars, forty-one), dining car and a sleeper for the personnel. The beds are placed side by side, running crosswise of the cars, with 12-inch aisle between each two beds and a foot aisle running on side of cars at foot of beds 30 inches wide, which gives ample passageway and allows free ventilation without exposing patients to window draughts.

A unique feature of the train is the installation of an overhead trolley, running from the end of the vestibule of each car through to the opposite end of the vestibule, and connecting to the trolley

Fig. 5. Interior of a ward car of the Maryland state hospital train. At the further end is the stretcher containing a patient, suspended from the trolley running through the train.

wheels is attached a small chain lift, which in turn lifts the stretcher, which has been especially constructed so that a patient can be taken to the end of rear of patients' car, placed on this trolley and carried to his bed in whatever car he is placed without being moved from this stretcher. The stretchers have been made so they readily pass through the doors and in addition are also used in the ambulance. Consequently, the patient, once lifted into the ambulance, after being placed on the stretcher is not again moved from the stretcher until he is placed in bed or on operating table, as case may be. The trolley is also arranged so it can carry food and trays from the dining car to each patient's bed.

Each car has tables and chairs for the comfort of the patients. All doors, windows, and ventilators are covered with the finest mesh brass screens.

The personnel will consist of three surgeons and an anesthetizer, two graduate nurses, four nurses' aids, two orderlies, and one electrician. The doctors' and nurses' aids are volunteers, serving without pay, also ambulance drivers. The ambulances were the gift of one of the gentlemen who will drive an ambulance for the train.

The funds that have made this train possible have come from the state of Maryland, the Maryland Society of Colonial Dames of America and from individual sources. The work of equipping train, preparing dressings, etc., has all been done by volunteers.

The train, as it now stands complete, represents one of the many steps taken by the state of Maryland in its effort to prepare for any emergency that might arise out of the present war, and it is a comfort to the many people who have visited and inspected this train to know that one of the first thoughts of the governor of the state of Maryland and the Preparedness and Survey Commission of the state has been toward the care, comfort, and aid of those who might be injured in the service of their country or their state. The people of Maryland are justly proud of the fact that this is the first train of its kind that has been placed in commission in the United States, and that, no matter how many more trains may be developed during the present war, Maryland has blazed the trail in this service.

As "he also serves who only stands and waits," so stands the Maryland State Hospital Train, with its personnel ready to respond to the calls of its country and its state, its object, its reward.

STANDARDIZATION OF HOSPITALS—THE UNIVERSITY OR TEACHING HOSPITAL

Items That Enter Into the Efficiency of the Ten Departments, With Percentages Apportioned to Each Under Scheme Published Last Month—Some Discretion to Be Allowed in the Markings

By JOHN A. HORNSBY, M. D., Chicago, in Collaboration with MISS MARY WHEELER, Principal of the Illinois Training School, Chicago; DR. SOLOMON STROUSE, Former Pathologist in and now Member of the Medical Staff, Michael Reese Hospital, Chicago; MISS RENA S. ECKMAN, Former Dietitian, Massachusetts General Hospital, now of Teachers College, Columbia University, New York; DR. J. T. CASE, Roentgenologist, Battle Creek, Mich.; DR. EDWARD S. BLAINE, Roentgenologist, Cook County Hospital, Chicago; MR. E. C. LARSON, Former Accountant, now Assistant Superintendent, Michael Reese Hospital, Chicago; MR. MICHAEL M. DAVIS, Jr., Director, Boston Dispensary, Boston, Mass.

IN our last paper we discussed the several departments into which a hospital might be divided for purposes of measuring standards; and we accorded to each of these departments what we thought was a fair percentage of allowance, assuming the perfect hospital to represent 100 percent and each of the departments a fair proportion of that total. We also indicated some of the features of each department that should be used in the marking.

This month we propose to discuss some of these departments and to indicate as clearly as may be what Class I, the university or teaching hospital, may be expected to do and be and have in order that it may receive the highest marking permissible in this standardization scheme.

MEDICAL STAFF

Attending Staff.—First let us take the medical staff, including the visiting staff, the house staff, and the nursing department. Miss Wheeler does not like the idea of scheduling the nursing department as a part of the medical staff. She thinks that department should be considered an independent one, given a higher total percentage mark than 15 and that it should be adjudged separate from the other departments. Some of us have thought that the nursing department is actually a part of the medical staff and that 40 percent was not too high a percentage to be given to the whole of the medical staff, leaving 60 percent for the rest of the hospital.

Let us now discuss the attending staff, to which we have accorded a possible 20 percent in the marking; and we are thinking about the following heads: personnel of the staff, completeness of the scheme of organization, responsibility of staff heads, simplicity of the organization, team-work, original work, investigation and publications.

It has been said that a hospital can be no better than its medical staff, and that the character of medical men in a community can be judged largely by the character of the hospital in which they work. If that is true, then the character of med-

ical men in a university or teaching hospital is the most important feature of the institution, and more weight should be given to the personnel of the visiting staff than to any other single feature. A medical man may be a physician of the highest attainments in his profession and of the highest standing among his fellows, and yet he may be a poor staff member—sometimes because he seems unable to do team-work with others, in other cases because he fails to realize his responsibility to the institution and as a part of its administration, or because he fails to keep up with the literature of the department in which he is engaged, and sometimes, again, because of personal peculiarities or moral obliquity. No medical staff in a hospital can be rated high whose members are appointed because of favoritism, political or social influence, or for any other reason than personal and professional fitness. The school of which the teaching hospital is a part would suffer in even a larger measure by the unfitness of its faculty members, and, as most schools are located where there is a wide choice of medical men for faculty membership, school or teaching hospital staffs are usually of a very high character because the success of the school itself depends on this.

After the personnel of the staff, the most important feature is the scheme of organization, its completeness and simplicity. This means that there must be an organization very definite in character, with clear-cut departments having responsible heads and with other members whose work can be coordinated like the parts of a well-running machine. There must be not only good team-work in each service, with a responsible head, but also good coordination between the services. We are not thinking now about the teaching factor or about the care of patients alone; as, for instance, a patient is brought into a hospital and in the admission room, after a casual examination, is assigned to a particular service. The diagnosis may be obscure after the patient is in bed; it may be a border-line case. If the service to which the patient has been sent fails to call in the other services for counsel in the case, there is lack of team-work and coordinated effort, and to this extent that hospital fails to give that patient the best that modern medicine has to offer in diagnosis and obviously in treatment. The hospital failing in this coordination should be demarked for the neglect.

Some hospitals in this country have built whole libraries from their medical records, the most valuable statistics and data in the literature, data worked out of the personal experiences of the men in the hospital. The libraries in most hospitals in this country are absolutely worthless because of the carelessness and neglect of members of the medical staff in the keeping of their records of cases. A teaching hospital is not to be forgiven for failure to keep proper records; if records are not properly kept the medical staff is to blame and the hospital should be demarked for the failure.

A hospital in which good records are kept is doing work of investigation and its own records are being used for the purpose; the hospital should be well marked because of this fine point.

The medical staff in a hospital in which good records are being kept and investigation carried on will be stimulated to publish its work and good work will come out of such a hospital. The hospital should be marked accordingly and demarked if its medical work is not being published.

The House Staff.—The house staff in a hospital is just what the visiting staff makes it, and in a teaching hospital the members of the house staff should be the best young men who graduate from the institution. They should be chosen because they are the best, and if they are working under a high-class visiting staff, made up of members of the faculty of the school, they will be kept on their tiptoes, eager for information and for hard work. If the visiting staff is the right sort, the house staff will respond to the demands made upon them. They will see that hard work is done on each patient, that the laboratory work is efficiently and adequately performed, that the nursing service is up to the mark, and that personal attention is given to patients.

We have allowed only 5 percent as a total for the house staff, for the reason that the character of the house staff is dependent on the character of the visiting staff; the former is not an independent body. Of this 5 percent the personnel is the most important thing; the plan of organization, the discipline and the team-work come next. In most hospitals the house staff is organized to suit the convenience and personal interests of members of the visiting staff and not for the best good of the hospital as a whole, of the patients, or of the interns themselves. Only a rotation service is an adequate service for the training of young medical men; too frequently the house staffs of teaching hospitals are not organized with rotation service for interns—because the chiefs of the medical services prefer to have interns remain a long time in their service so that they may be broken into the individual ways and methods of their seniors and thus save trouble in the training of new men. This method serves to create specialists in the intern staff, although the intern who is permitted to specialize is not obtaining a general or rounded training in the fundamentals of medicine. A young man who goes on the surgical

service is neglecting his greatest opportunity for diagnosis under the specialists in the other services and such a man, when he leaves the hospital, will not be a well-rounded-out man. We know interns that are leaving some of the best hospitals in the country, affiliated with some of the best medical schools, who have served almost their entire internship in one department and who consequently know almost nothing about general medicine—men who are being molded into surgeons, knowing nothing about the eye, and absolutely nothing about obstetrics—and yet these men when they go out into private practice cannot at once jump into a specialty and they will fall down deplorably in the general practice that must inevitably fall to their lot before they have secured their place in any specialty. Therefore, the hospital that has rotation of service should receive a high mark and those that confine their interns to one or two services under one or two specialists should be marked far down in the scale.

Moreover, an intern corps in a good hospital should handle its work with almost military precision, as part of a team and not as an independent unit.

The Nursing Department.—There are two organizations upon which a nursing corps must be based: first and most important, the medical side of their work, and, second, the administration of the corps itself. Just as in the case of the interns, if there is a fine medical staff with proper organization and made up of the right sort of men, the nursing work of the institution must be of the highest character; after all we are training young women in our hospitals to nurse and care for the sick, and this part of the training must be inspired and fostered by the medical staff.

To a large extent, however, this medical side of nurse training, especially in our teaching hospitals today, is directed by the heads of the nursing department who have already had their training and education under able medical men and women. So that the personnel of the heads of the training school is a most important factor and a high mark should be given to a training school that has high-class heads. But one cannot make a "silk purse out of a sow's ear" or good nurses out of poor material; consequently the personnel of the training school is highly important. Teaching hospitals are usually regarded as good hospitals in the community and consequently they usually have less trouble in securing good material out of which to make nurses than other institutions. If hospitals but knew it, the higher their standards are maintained, the easier it will be for them to secure candidates for the training school. That is proved in every well-conducted hospital in this country; even some very small institutions without a school affiliation find no difficulty in obtaining the best material for their training schools, solely for the reason that their standards are kept high.

But it takes more than finely trained and exceptionally intelligent heads of a nursing department, and more than well-educated, cultured, refined, and well-bred young women to make an exceptionally good training school; it takes system and organization—a good arrangement of the working services, a good curriculum, well maintained, good discipline, well-kept records, and last, but not least, good living conditions for everybody in the training school, heads and pupils.

LABORATORIES

One of the chief functions of the university or school hospital being to teach the practice of medicine, all of the facilities of the hospital should have a teaching purpose notwithstanding the fact that these facilities are in constant use and selected with a view to the care, cure, and comfort of the sick. A great deal of the routine work in the laboratories of such a hospital is performed by the students, but should invariably be done under the direction and control of trained experts, and these experts should always be in close affiliation—indeed, in direct contact—with the clinic; that is, with the patients.

There is a difference of opinion among the best laboratory men whether the hospital laboratory in a teaching institution should be directed by one person and all activities of the laboratory center under this one control or whether the laboratory should be divided up, each service having its own independent organization, its own director, its own personnel, and in its own quarters. The solution of this problem will hinge upon the character of the laboratory men available or in the service, but, whichever way it is decided, there must be some system of arrangement by which the laboratory itself, in some way, can be made a rallying point and a center for study and investigation for the various services, because in a final analysis things that will be of interest to the medical service will not be paramount in the surgical section, and those things that will be of interest in the children's department might not be of special interest to either of the others, and so with obstetrics and the many specialties in the hospital.

The scheme of organization as indicated above is a very important factor in the laboratory, and upon a proper settlement of that scheme will depend the successful operation of the whole hospital, including the study and investigation and the

scientific atmosphere of the institution and the publications that emanate from it.

We have allowed 10 percent as a high mark for the perfect laboratory; without question the personnel is entitled to at least half of that allowance; the coordination of all the agencies for the study of disease; that is, the laboratory and the clinical services, should be entitled to 3 percent more, and 2 percent is a sufficient amount for the physical equipment and for the architectural arrangement of space.

We need not go into the activities of the laboratory. These will be definitely fixed if the personnel and the atmosphere are right.

The X-Ray Department.—Space is a very important matter in an x-ray department in a school or teaching hospital because large numbers of students must be accommodated. Thirty-five hundred square feet is none too large to furnish (1) a waiting room, (2) consultation room and plate exhibit, (3) a roentgenographic room, (4) a roentgenoscopic room, (5) treatment room, (6) plate developing or dark room. Some of these spaces can be eliminated if there is a switchboard room located between two or more of the other operating rooms and the space may be thereby somewhat curtailed.

The x-ray rooms should not be located in the basement or in the attic of the hospital. They should be convenient for patients from any part of the house, away from noise and bustle as much as possible, and out of sight of the curious. If there is an out-patient department on whose patients x-ray work is performed, the department should be located conveniently to the out-patient unit. It is not necessary that the x-ray department be located contiguous to the operating rooms, because it will be rare that x-ray work will be done on patients that are going to or coming from the operating room.

In cystoscopic work with collargol or other opaque mediums in ureteropyelography it is an advantage to have the cystoscopic room convenient to the x-ray room in order to lessen the danger of discomfort to the patient. Differing vastly from the pathological department, in which equipment is a minor consideration, the x-ray department needs large and expensive apparatus, and it may be doubted whether we could render a better service in helping to standardize this department and to evaluate it according to its deserts than to give what we believe to be the necessary equipment in an x-ray department in a school or teaching hospital. We are giving this list below.

As in the laboratory of pathology, the most important factor is the personnel, the director and his associates, and in these days and because it is necessary to include a dark room and photographic room, we have sometimes incorporated the general photographic plant of the hospital with the x-ray department, using dark rooms and developing facilities for both.

The apparatus should include the following:

ROENTGENOGRAPHIC EQUIPMENT

1 large capacity x-ray transformer with control, switches, meters, etc.
1 x-ray table with horizontal stereoscopic plate shifter with accessories.
1 (or 2) batteries for Coolidge currents.
1 vertical stereoscopic plate shifter.
1 x-ray tube stand with various-sized cones and accessories.
1 x-ray exposure time switch.
1 head rest.
1 large x-ray plate lead chest.
1 eye localizer apparatus.
2 6-tube racks.
1 lead-lined operating booth (or floor screen).
2 each 8×10, 10×12, 11×14, 14×17 x-ray intensifying screens and cassettes.
Overhead high-tension wiring, trolley reels, tube connectors, wall insulators.
Accessories of wood, blocks, covered bricks, etc.
1 fine-focus Coolidge tube.
1 medium-focus Coolidge tube.
1 broad-focus Coolidge tube.
6 7-inch tungsten target gas tubes or 2 hydrogen tubes.

DARK-ROOM EQUIPMENT

1 developing tank (Bowen model or similar).
12 large (11×14, 14×17) developing frames.
24 small (8×10, 10×12) developing frames.
1 ruby dark-room lamp (No. 2 Wratten or similar).
Chemicals for developing solutions, fixing solutions, etc., scales, graduates, glassware, etc., rubber aprons, gloves, etc.
1 small clock.

ROENTGENOSCOPIC ROOM

1 small-capacity x-ray transformer.
1 vertical roentgenoscope, with 1 Coolidge tube (special fine focus) arranged for orthodiagraphic projection, with 11×14 or 14×17 screen.
1 horizontal roentgenoscope, with 1 Coolidge tube (special fine focus).
1 11×14 or 14×17 screen.
1 high-tension throw-over switch, with necessary overhead copper wires.
1 heavy lead rubber protection apron.
1 pair heavy rubber protection gloves.
1 (or 2) foot switch control to x-ray tubes and overhead blue or red light, or preferably finger push-button control by magnetic switch.
1 accessories for barium meal administration and for barium clysma.
3 transparent celluloid sheets same size as screen for orthodiagraphic work, etc.

ROENTGENOTHERAPY ROOM

1 large-capacity x-ray transformer to deliver 10-inch spark gap continuously, with rheostat, control switches, meters, spark gap indicators, etc.

1 lead-lined operating booth for all controls, rheostat, meters, etc. (or lead floor screen for protection).
1 x-ray treatment tube stand with various-sized lead cones, etc.
1 broad-focus Coolidge tube, with controls, batteries or transformers, etc., overhead copper high-tension wires, trolley reels, connectors, wall insulators, etc.
1 treatment time switch, lead sheets for protection of skin, lead rubber sheeting, accessories, etc.
1 couch or low table with soft mattress.
1 table for accessories.
Chairs.

DIETARY DEPARTMENT

The dietary department of a university hospital should pass inspection under the score-card system and obtain a rating far in advance of that of any other type of hospital in existence.

Beginning with the dietitian, we should find the woman in this position a person of university training or its equivalent, with at least several years' experience behind her. If she is skilled in any other line of work than dietetics, so much the better for her breadth of vision and usefulness.

In an article entitled "The Status of the Dietitian, Past and Present," written two years ago and published in this magazine. Miss Graves gives an excellent description of what we should expect of the dietitian in a hospital of the highest rank.

Such a woman, educated, well-trained, mature, broad-minded and experienced, should have charge of the entire dietary. In a hospital of 250 beds and over, at least one assistant will be needed to attend to the details of housekeeping. Under the assistant a competent man or woman will be at the head of kitchen and serving rooms. The topographical arrangement of the department may require more than one such person. In that case the hospital itself should be rated for inefficiency rather than the dietary department.

General oversight over all the dietitian must have, but trivialities will be spared her in a high-class organization. The more minor details she is required to be personally responsible for, the lower the rating of the dietary department in this respect.

The dietitian will be expected to teach at least the advanced work in dietetics. She may or may not have the cooking lessons taught by a teaching assistant, but the instruction must go on under her direction. Proper teaching cannot be done or good results obtained unless the cooking laboratory is properly lighted, ventilated, and equipped, and is of suitable dimensions. The lessons and lectures should be given at a time when nurses are not unduly weary from too many hours of work. At least two and one-half hours are required for a cooking lesson, and the course should consist of an adequate number of lessons—from twenty-four to thirty-six—calculated to give the pupil nurses an intelligent understanding of the subject.

In some localities pupil nurses may enter their hospital training already fairly well instructed in the first principles of foods and cookery, but in no case should they be entirely excused from hospital dietetics. This subject cannot be finished outside of a hospital.

The diet kitchen and its closely related features require a series of rooms to carry out their operations in the best way. A teaching laboratory is essential, with individual equipment for the student nurses. Adjoining this should be a small dining room in which the foods prepared in the cooking lessons may be displayed or served. This room also may have other uses, as will be mentioned later on.

The main diet kitchen should either connect with these rooms or be close by. Here (in the main diet kitchen) pupil nurses are drilled further in the theory and practice of dietetics by preparing foods for prescription diets and filling type diet orders which cannot be conveniently done in the general kitchen. The quality and variety of these type diets will be judged not only by the ingenuity shown in their preparation, but also by the methods of transporting them to the ward or to the individual patient.

In the diet kitchen also student dietitians may do post-graduate work in the practical side of hospital dietaries. The university hospital owes it as a duty to the profession of dietetics to receive as many well-trained students as it can possibly accommodate with benefit to the institution, either housing them during their stay or paying a small salary to cover expense of living.

In the work of the diet kitchen, the dietitian should cooperate with the chemist and physician in the preparation of such diets as are needed not only for clinical diagnosis or study, but also in diet therapy for the regular physician.

And finally, but by no means of the least importance, the student physician should be considered. In the class laboratory, as before described, opportunity may be given for individual study of diet and dietaries, foods and food preparation, and those student physicians interested in diet therapy can actually know what this or that diet so often glibly prescribed may mean to a patient to consume or a dietitian and her pupil nurses to prepare.

The diet kitchen itself should *not* be a class room for teaching cooking. Satisfactory instruction cannot be given nor can the routine work of the diet kitchen be properly carried on if conflicting operations are in progress.

The dining room hereinbefore mentioned in

connection with the teaching laboratory gives an opportunity for welfare work among the general hospital personnel. Any employee, nurse, or doctor who needs temporary or emergency attention to diet can be sent here for that extra care. The results under proper management can only be beneficial. But it must be remembered that human nature is so constituted that half of the population would demand extra care, did wisdom not distinguish between what is necessary and desirable and what is imaginary.

Welfare work in diet cannot make up for what is lacking in other lines of social service work. And in the university hospital surely the social service department will be carried on and supported by strong, sensible supervision. And thus is indicated still another place where cooperation with dietitian and dietary department is advantageous.

If the hospital is run for the sake of treating patients as well as for educating nurses and doctors to the end that they may earn a living, the individual patient needs to be considered as far as possibly can be done while considering the welfare of the institution in general. It is in the light of this statement that the dietitian needs to work directly as an officer of the hospital and in cooperation with the physicians and nurses. It is for this reason that her personal interest in the patients' dietary in general and also in particular cases is of great advantage, especially when head nurses are young and inexperienced.

Proximity of the dietitian's headquarters to the lines of travel of other departments, official, pathological, chemical, and medical, and also to her primary responsibility, the kitchens, serving rooms, and dining rooms, are necessary arrangements in the building plans of the hospital.

The quality and variety of type diets for various orders should not pass by the dietitian without a question. The significance of the caloric value of the diet, physiological needs of the patient, physical and chemical composition of food, often have far more need of attention than the prescribing physician gives due heed to; and the same inane formula may be filled day after day if no one dares to question the real value to the patient.

Each day in the hospital come three important events in the lives of everyone—the three meals. The kitchen, the serving room, the dining rooms—shall they be well or badly located, well-lighted or gloomy, stuffy or swept by fresh breezes of pure air, openly planned and laid out or full of dark crevices and corners to be the denizens of vermin? Shall they be conveniently arranged or shall labor be doubled and trebled by crossing and barring lines of travel and tracing and retracing of routes? Shall sanitation be studied in every possible way from the delivery of the article of food to its consumption? Shall employees be uniformed, inspected, provided with sanitary quarters and compelled to observe clearly methods of procedure? Look for the signs of all this both on formal inspections and also when employees are off their guard.

What machinery shall we expect to find in an institution kitchen of this size, and has satisfaction been given by the kind or variety chosen for the purpose? Is the machinery placed most conveniently for the operator and for the employees served by the machine? As a test of efficiency, follow some operation from start to finish. Or take some article of food and trace its path from its entrance into the hospital store over the various routes it is transported or carried until it reaches the plate of the patient or of one of the hospital family—how many unnecessary trips did it make because of badly arranged equipment? Such a proceeding is instructive to managers and heads of departments.

THE PHARMACY

In these days of the supremacy of the dietary the progress and advancement of the hospital pharmacy is crablike, and, in proportion as the various laboratories, x-ray department and the dietary grow in importance, the drug department recedes and becomes less important.

And yet, medicines really are necessary, and a vast number of medical and surgical appliances and their appurtenances are bought in large quantities or are made in the hospital out of raw materials, and consequently the pharmacist's office is important, first in organizing and managing his department in such a way that every advantage may be taken of markets and prices and that crude materials of low cost may be prepared and used to the best possible advantage and at the lowest price. Next, the program or scheme of organization of the pharmacist's department is a matter of the greatest importance and of equal or even greater value is the personnel, the director himself.

Dr. W. A. Puckner, secretary of the Council on Pharmacy and Chemistry of the American Medical Association, suggests that it is highly important and desirable that the purchasing of hospital pharmaceuticals be based on a standardized list of drugs the value of which has been established. These established drugs, because of their extensive use, are invariably of a high quality, and, because of the large demand, are sold under competitive conditions and therefore at a relatively

low price. Such a standardized list of drugs may be found in "Useful Drugs," which has been prepared by the Council on Pharmacy and Chemistry, and which, we are informed, has been taken as a guide by the Medical Council of Defense in the selection of the drugs which are to be supplied to our armies in the field.

The hospital pharmacist need not be to any great extent a laboratory man, but he should be a well-educated, well-informed, trained pharmacist, who has a thorough knowledge of drugs, both as concerns their market conditions and as concerns the method of examination for purity. He should know which drugs are likely to require examination and should be able to make tests for purity.

There is an immense amount of technic involved in the preparation, distribution and giving of medicines and the time and energy of a large number of orderlies and nurses can be either conserved or dissipated according as the method of handling these things is efficient or poor.

The architectural arrangement of the pharmacy does not matter a great deal, but it is important that there be conveniences and that these conveniences be arranged so that the least possible time and energy are required to take advantage of them, as, for instance, the compounding department should be the center of the items that are to be compounded and all these should be within easy reach. It is important also that the refrigerators be convenient of access and especially that the storage space for serums, antitoxins, etc., should be correctly built, correctly temperatured and automatic of control. It is important also that the larger storage space for drugs of wholesale character shall be of proper temperature and conveniently located. A poor arrangement here means time wasted.

The most important thing about the architecture of the pharmacy, however, is in the arrangement and design of the medicine cabinets on the various units of the hospital. This is the place where the time of nurses and doctors can be wantonly dissipated or greatly conserved.

In the interests of the rational and individualized treatment of patients, however, the convenience of the unit should not be carried to the extent of numbering the various medicaments and thus forming in the physician the habit of prescribing numbers instead of drugs, a condition which in the past not only has been detrimental to the patient in the hospital, but has had a degrading influence on the whole medical profession because the hospital intern of today becomes the practicing physician of tomorrow and carries over into his general practice the bad habits that he learned in the hospital.

So that we have the five points in the marking of the pharmacy as indicated in our last number and it will be convenient to distribute the 5 percent which we have allowed to the pharmacy equally among all these items.

OUT-PATIENT DEPARTMENT AND SOCIAL SERVICE

This is the newest and probably the least developed of all modern hospital activities, at least there are fewer good dispensaries or out-patient departments in the hospitals of this country than is the case with any other departments into which we have divided the hospital. Mr. Davis has studied this problem very carefully. Of the 5 percent which we have allowed for these branches of service, Mr. Davis devotes 2 percent to scope of the work and the personnel, 1 percent to management, including team-work with other departments, 1 percent to the record-keeping system and 1 percent to the architectural arrangement of space.

Social service work is not necessarily connected with the out-patient department. The book by Miss Ida M. Cannon, entitled "Social Work in Hospitals" (Russell Sage Foundation, 1910), describes fully the organization and methods of social work in hospital wards and in out-patient clinics, and may be referred to with profit.

Mr. Davis illustrates his conception of the relation of the hospital to the dispensary, and we are reproducing his chart, and his ideas as to what the dispensary and out-patient department of a university or teaching hospital should be.

The story told by the chart may be explained in more detail. A hospital needs an out-patient department for three main reasons:

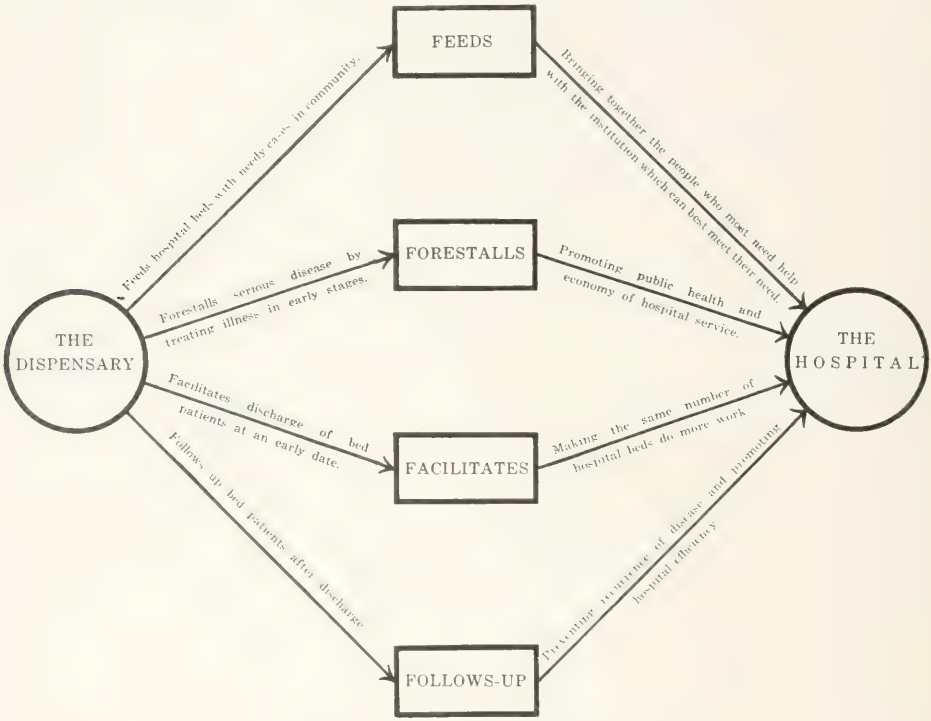
1. The out-patient department increases the medical efficiency of the hospital itself.

Let us remember at this point that an out-patient department is not necessarily confined to hospitals doing charity work or to the charity patients of hospitals which have private rooms as well as ward rooms. An increasing number of hospitals, especially in communities of moderate size, maintain out-patient departments for cases which go into private or semi-private rooms. Such out-patient departments are usually to carry out surgical after-care, dressings, etc. The fees for such out-patient departments are usually arranged on some understanding with the doctor so that he has a share of the amount collected, the hospital usually receiving something to cover the administrative expense. This plan can readily be extended beyond surgical cases. Its value and practicability depends on local conditions.

Such a clinic is an illustration of the manner in which the hospital out-patient department contributes to medical efficiency. It promotes thorough follow-up of cases after discharge from the wards. When a patient is a working man and needs care following his period of confinement to the hospital bed, it is obvious that a systematic following-up of his case will promote his complete return to full working strength. All too many relapses follow upon the discharge of patients who are able to leave a bed, but not

able to return to work or to their homes unless under medical supervision. The out-patient department is needed to make the medical efficiency of the hospital beds reach its maximum.

Care in a hospital bed is only a stage in the history of the patient's illness. The out-patient department of the institution enables medical care to extend over the whole course of an illness instead of merely its bed period. An out-patient department can often by treatment prevent a disease from becoming serious and thus forestall the use of the hospital bed itself. By thus forestalling serious disease, and also by following up disease after the discharge from the hospital bed, the out-patient department links up the acute illness with the preliminary or with the convalescent stages and promotes medical efficiency all around.


FEEDS
Feeds hospital beds with needy cases in community.
Bringing together the people who most need help with the institution which can best meet their need.
FORESTALLS
Forestalls serious disease by treating illness in early stages.
Promoting public health and economy of hospital service.
THE DISPENSARY
THE HOSPITAL
Facilitates discharge of bed patients at an early date.
Making the same number of hospital beds do more work
FACILITATES
Follows up bed patients after discharge.
Preventing recurrence of disease and promoting hospital efficiency
FOLLOWS-UP

2. The out-patient department promotes medical and administrative economy.

Forestalling serious disease is not only a contribution to the medical efficiency of an institution: it is also an economy. The substitution of ambulatory for bed care means a great saving. By the use of the out-patient department in following up discharged hospital cases, it is frequently possible to send a patient out from a hospital when, without the out-patient department, the physicians or surgeons would have been unwilling to discharge him. It is not too much to say that an increase in efficiency of from 10 to 30 percent (the proportion has been estimated as over 50 percent in some services, such as the orthopedic) is gained by an efficient out-patient department. The same number of beds will go this much farther in providing service, because of the more rapid turn-over of cases.

In a teaching hospital, an out-patient department fulfills an important function of supplying the ward with cases which are not only needy, but are interesting from the scientific or pedagogical standpoint.

3. The out-patient department furnishes a hospital with an additional and attractive basis of appeal for financial support.

A well-managed out-patient department interests people who may give to the hospital. It is full of concrete cases of human need; it interests a visitor. A children's clinic, for instance, or an orthopedic or a dental clinic, is replete with vivid appeal. The out-patient department is used by other organizations—the Associated Charities, the visiting nursing associations, the public schools, industrial establishments sometimes—and thus the circle of those who feel the influence of the hospital is widened. It affords avenues for social as well as strictly medical service which can be utilized as new means of increasing the interest of the community.

And, after all, the reasons why most hospitals need an out-patient department depend on a larger reason, viz., that the community itself needs the out-patient department. There are people in every community who cannot afford to pay for private medical service. However willing individual doctors may be to give their services to especially needy cases in their private offices, most cities and practically all industrial communities need dispensaries. The best place for a dispensary treating general diseases is in conjunction with a hospital as an out-patient

department thereof. If the hospital responds to the need of its community by establishing an out-patient department to meet the need, it furnishes for itself a new basis of support. A well-managed out-patient department, of course, involves expense, but it is the kind of expense which in the long run will pay dividends.

MEDICAL RECORDS AND ACCOUNTING

We have allowed 10 percent for medical records and accounting, 5 percent for each, and the items will be practically the same; that is, the first item will be the comprehensiveness of the plan, the second, simplicity; the third, cohesion and coordination between the medical records and the financial operations. In the medical records there is one more item, viz., the value of the records for scientific purposes; that is, for the literature, and in the accounting that item is balanced by what we might briefly term information. There are many beautiful systems of bookkeeping which apply to hospitals and which are accurate, comprehensive and simple, and which yet do not give to the busy superintendent who happens not to be a certified accountant the information immediately available that will enable him to take advantage of various opportunities to save or make money for his institution. Many a hospital has fallen into financial straits because the superintendent did not have and could not get the information that would permit him to know which of his departments were making and which were losing money and how much. It is necessary not only that this information be available, but that it be constantly available, immediately available.

We are not by any means agreed as to what a competent medical record system is or shall be and we differ quite as radically when we come to the bookkeeping of the financial operations. Both these points are to be solved soon and satisfactorily; the point is made here that medical records and the accounting system are grouped as one department and for the reason that they are interdependent and cannot be separated advantageously; for instance, the financial department of the hospital is intensely interested in the admission and discharge of patients and even more interested as to whether the patient is a paying one or free. The accounting system is also deeply interested in what is done for the patient in the hospital, whether he has antitoxins or serums administered, or x-ray pictures taken on a surgical operation, because in most hospitals all these constitute special charges, although they should not do so.

ARCHITECTURE

We have allotted to architecture a maximum of 5 percent in the marking of a hospital on a basis of 100 percent. We might divide this 5 percent into five parts with 1 percent for each: (1) plan of the hospital as a whole; (2) plan of the auxiliary installation, such as plumbing, steam-fitting, power plant, elevators, ventilation, vacuum cleaning, laundry machinery, system of sewage and garbage disposal; (3) the execution of details (so many hospitals are sloppy in appearance because of want of attention to details); (4) materials employed both in the hospital itself and in the auxiliary installation; (5) economy both in planning and in the administration of the institution.

EQUIPMENT, MEDICAL, SURGICAL, AND PHYSICAL

We have allowed 10 percent on equipment, 5 percent of which may be distributed to medical and surgical equipment and another 5 percent to what might be termed purely physical. The medical and surgical equipment consists of the equipment of the scientific units, the operating and dressing rooms, the ward apparatus, such as percolators, appliances for lifting and handling patients, dressing carts and stretchers and apparatus for nursing, such as rubber goods, bed-pans, urinals, irrigation apparatus, etc.; cautery apparatus, electric batteries, cystoscopic instruments and the like, surgical dressings, including bandages, gauze, cotton, etc. The completeness of this equipment depends not on its elaboration, but on the amount of apparatus necessary to do the things that the doctors order done, and under this head will come also the various so-called technical "boxes," such as hypodermic outfits, venesection outfits, spinal puncture apparatus, irrigation outfits, etc.

The physical equipment is obvious: beds and their appurtenances, back rests, head rests, body rests of various sorts, good springs and mattresses (mattresses capable of being sterilized and renewed), tables, chairs and the other furniture that goes to the equipment of rooms, wards, etc., in the hospital. One of the high marks in this particular item would be the fitness of all the furniture for the purpose which it is to serve.

MANAGEMENT—ALL DEPARTMENTS

The success of any hospital will depend very largely on the coordination of the various departments. Of the university or school hospital is this especially true, because the teaching function is one of prime consideration. This function is in the hands of the medical staff, which is the faculty of the school, and unless all the physical departments of the hospital are coordinated and made to work for the benefit and in keeping with the plans and purposes of the school there will be failure in results; therefore the organization of the administration of the hospital is highly important. One of the five points allowed for this department should go for organization.

One point should go for personnel, the superintendent and department heads, because, unless these people are efficient and know their business, then the scheme of organization is no good.

Two points should be reserved for the handling of people, the public, the staff, the patients, the employees and the trades people. It makes every difference in the world in a hospital whether there is courtesy shown by everyone in the institution to everyone from the outside. Entirely too frequently the people in a university or teaching hospital are allowed to feel themselves independent and to treat outsiders brusquely, not to say rudely.

One point may be given to cleanliness and order in the hospital. This is a large subject in itself, and we would like to apportion a greater amount of credit for a well-kept, orderly institution. The walls and floors should be clean, runners and rugs should be neat and have no frayed edges, the furniture should be neat and show evidence of having been cleaned and polished. Patients' beds and those in the nurses' home and in the house staff department should be well made and neatly set up, pillows smoothed out, sheets well tucked in. The patients themselves should be kept neat and clean, faces and hands washed, nails attended to and hair brushed. It should be insisted that the kitchen must be clean and neat, also the serving rooms, the utility rooms, the dispensary, and admission rooms. Many times the reception halls and parlors are about the only places in the hospital that are clean and neat. Order and cleanliness, of course, are to be valued, not for themselves, as sacred and superhuman ideals to be exalted above comfort, convenience, and all other considerations, but just in proportion as they contribute to the sanitation and smooth working of the hospital, and, above all, to the welfare of the patient.

That hospital in which the well-being or comfort of patients is sacrificed or subordinated in the smallest degree to a mistaken zeal for order deserves to be marked with a large round zero on the score of neatness.

COLUMBIA WAR HOSPITAL

Completely Portable Type—Ward Buildings of Wood With Double Wall—A Complete Building May Be Erected by Six or Eight Men in Two Days

By FRANCIS CARTER WOOD, M. D., Columbia University, New York

THE emergencies incident upon the entry of the United States into the war have, among other things, made very evident the necessity for the design and erection of a large number of hospitals to care for the normal percentage of sick among the enlisted men in camps and also for the wounded who will be returned from France. Two types of construction have been considered: (1) a completely portable form, the so-called standard base hospital type, which can follow the movements of the troops; and (2) a type to be erected in connection with cantonments and other permanent stations, which need not, therefore, be portable. The latter has been the subject of much discussion in army circles, and various plans have been evolved. There is nothing especially novel about these non-portable buildings, however, as they follow the ordinary lines of hospital construc-

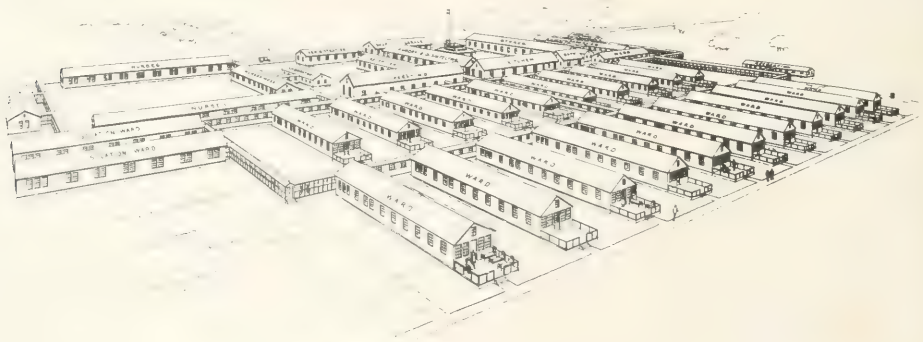


Fig. 1. General plan of Columbia War Hospital.

tion, except that they occasionally employ rather unusual makeshifts which would not be used in more permanent structures, such as the lining of rooms with building paper to insure their being kept at a comfortable temperature even during winter weather.

The Columbia War Hospital, which is the subject of this paper, is of the completely portable or base hospital type and accommodates 500 patients. The design is a composite one and is the result of a study of the methods employed on the English and French fronts. It combines the portability of the old tent hospital with many conveniences which the latter can never possess in the way of ventilation, freedom from dampness, and ability to keep the wards at a reasonable temperature even during extreme cold weather.

Fig. 2. Putting on roof of ward building, Columbia War Hospital.

The first plan, as shown by the architect's sketch (Fig. 1), called for buildings to occupy a space considerably over ten acres in extent. In order to adapt the buildings to the slightly irregular piece of land available because owned by Columbia University, some minor changes in the original arrangement were made, though the number of buildings, thirty-eight in all, remained the same.

The situation of the roadway on the south side of the property, for instance, necessitated the removal of the reception and administration buildings to a court to the south. This reversed the position of the wards so that if all the porches on the wards were made to face the south, as is the generally accepted rule in hospital construction, a very long series of corridors for the transport of food from the kitchen would be necessary. One-half the wards were, therefore, turned around so as to make the porches face the north, though they still have a complete east-and-west exposure to sunlight and receive some sun from the south owing to the low roofs of the ward buildings.

The other half of the series of wards has a southern exposure for the porches. By this arrangement the entry of food wagons directly along a single central corridor from the central kitchen to the diet kitchens in the wards was made possible. The operating room was placed on the extreme eastern end of the plot, so that it would have a central position if the hospital is extended to 1,000 or 1,500 beds. The garage was placed across the street so that the patients and staff would not be disturbed by the clatter of motors while these were being repaired or tested.

All patients and supplies will be received in a central court, about which are grouped the reception building, where patients are examined before admission, the building containing the offices and record rooms, and the stores and kitchen.

The reception building contains complete equipment for the disinfection of the patient's clothes on admission, facilities for removing vermin, shower baths, etc., and a series of small examining rooms for individual patients.

The general size of the buildings can be approximately estimated from the plan. The dimensions of the ward buildings are 24 by 99 feet, with, in addition, an uncovered porch at the end measuring 24 by 16 feet. The isolation wards are slightly longer, 18 by 138 feet. The height of the wards at the eaves is about 8 feet; at the peak of the roof, about 15 feet. Ventilators will

Fig. 3. Inside partly finished ward, Columbia War Hospital.

be placed in the roofs of the ward buildings if, after trial, it is found to be necessary. So far the wards have proved to be exceedingly comfortable. The operating room measures about 24 by 150 feet; the kitchen, 28 by 120 feet; the laundry, 28 by 174 feet; the stores, 28 by 176 feet; and the garage, 20 by 116 feet.

The operating room, kitchen, laundry, and garage are built of thin sheet steel, which comes in sections and is fastened together with a simple arrangement of a yoke and key made so that it

can be driven in with a hammer. The steel sheets are thin enough to permit bending by hammering if they have been deformed during transport. Each section is light enough to be handled by two men, the trusses require five or six. The foundations are concrete posts. The steel buildings were supplied by the Trussed Concrete Steel Company.

The remaining buildings are of wood and were furnished by the Illinois Lumber Company. It was anticipated that the steel buildings would be exceedingly hot, so arrangement was made to have cowls in the roof; these turn with the wind

Fig. 4. Row of completed wards and kitchen building, Columbia War Hospital.

on ball bearings, and as a system of ventilation have proved to be quite satisfactory; even in the hottest weather the buildings are comparatively cool, while before the installation of these ventilators they were often unbearably hot.

The wards and the other buildings are made of a double thickness of wood separated by an air space. The sections are supplied complete with the windows in place. The wooden buildings are set upon short posts, about 4 feet high (Fig. 2), which come as a part of the structure, though, of course, in case of emergency, the buildings can be placed directly upon the ground. On these posts are set the girders (Fig. 3). The joists can be seen lying within the rectangular framework. When in place these are held by bolts and nuts, the holes being already bored in the joists when they are received. Over these goes a steel yoke; and the notched floor beams are hung on these yokes. The floor, which also comes in sections, is then laid on and the erection of the walls is begun, the first few pieces being braced by nailing to them a piece of scantling which extends over to a near-by post. As soon as the end of one of the buildings is constructed, the roof girder is put in place and bolted on. This portion of the building will then stand by itself, and the further construction can be rapidly carried out.

Six or eight men can erect one of these buildings in two days, a larger number in correspondingly shorter time.

The protection of the roof is accomplished by laying over the wooden portion a layer of waterproof flexible composition roofing which can be fastened down with nails or can be held down by a board nailed to the roofing at each end. A series of rolls of the roofing material are shown in Fig. 2.

The general waterproof character of the buildings has been sufficiently tested, as several of them have been erected since June 1 and have stood through a number of heavy rain and wind storms without any discomfort to the inmates.

Each ward is planned to accommodate twenty-five patients and contains toilets and baths for the patients, a diet kitchen for the serving of meals and preparation of special foods, and a quiet room in which moribund or difficult individuals can be placed.

The drainage, in the case of this particular group of buildings, is accomplished by piping directly connected with the New York City sewers. If the buildings were to be erected at a distance from a city, of course, a special sewage system would have to be constructed. Owing to the availability of electric current, also, the buildings have been wired for electricity; some different scheme

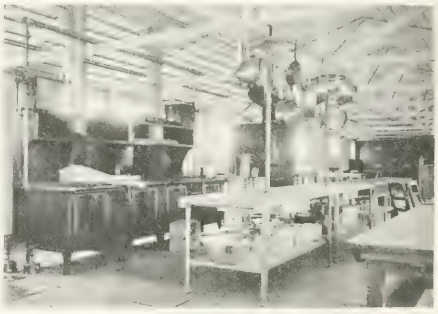


Fig. 5. Kitchen of Columbia War Hospital.

would be necessary if current could not be obtained.

The laundry machinery is supplied with direct-drive motors, and the steam used is furnished from a small auxiliary portable boiler. If electricity were not available, a separate power plant would have to be installed to furnish the necessary current. In France and Belgium the base hospitals have usually been placed where current can be obtained.

The method of heating the buildings has not been finally decided upon. The army has been in

the habit of using small stoves which can be fed with wood and are very satisfactory. As it is not intended that the plant under consideration shall be moved during the period of the war, it is probable that steam heat will be laid on in the buildings, with the exception of the kitchen and laundry, which are sufficiently heated by the ranges, hot water heaters, and steam pipes.

A portable ice machine which can be towed by a traction engine furnishes sufficient ice for 500 patients and the necessary personnel, and supplies cooling coils to three portable ice-boxes in the kitchen.

The cost of one of the wooden ward buildings, including the painting, plumbing, electric wiring, and terracing, is approximately $3,300; the cost of the operating room building, which is of steel ceiled with wood, and including the electric light, plumbing, concrete floor, painting, etc., is approximately $8,000, with an additional $400 for metal skylights and ventilators.

The total cost of the plant for 500 patients, with water, light, and gas connections, painting, fencing, and grading, will not exceed $250,000. The equipment will cost about $20,000 more. A steam heating plant and the necessary plumbing and extras will possibly bring the total to something under $300,000, thus producing a hospital at a cost of about $600 per bed.

The life of the wooden buildings is estimated to be at least five years in good condition. The removal of the buildings to another site has been computed to result in a loss of about 3 percent, this loss being chiefly allotted to the waterproof composition roofing and the concrete floors which have been placed in the operating room, the kitchen, laundry, and garage, in compliance with the rules of the fire underwriters controlling structures within the limits of New York City. In the field, wooden floors would be used instead. The steel buildings have, if properly cared for, an indefinite life.

The time required for the erection of the buildings, if sufficient labor is available and all the material can be delivered at once, would probably not be over three weeks, and with a very large force of trained mechanics could be reduced to less.

While the general plan of the buildings has been approved by the War Department for its base hospitals, it is possible that the experience gained in handling and working in these structures will be useful, also, from a civilian point of view as showing what can be accomplished in the way of rapid erection of hospital buildings in case of an extensive epidemic or in connection with the undertaking of large engineering enterprises, such as the building of canals, dams, or similar public works away from large centers of population.

THE TUBERCULOSIS CAMPAIGN IN NEW YORK STATE AND ELSEWHERE

Importance of the Local Hospital—Progress Made by the State of New York in Providing Hospital Facilities —Need for Larger Appropriation

In an address delivered before the convention of the New York Federation of Women's Clubs at Rochester, Dr. Otto R. Eichel, of the New York Department of Health, emphasizes the tuberculosis hospital as the most important preventive agency. The local or district hospital plan, which was the great constructive measure agreed upon at the great international congress of 1908, he regards as the best means for combating the disease. Of the campaign in New York State he says:

"New York City has set a wonderful example in hospital facilities. Outside of New York there are 57 counties in the state—5 are too small to need hospitals. Of the remaining 52 at the present time 33 have some form of institution established or assured; and this magnificent progress has been made almost entirely in the past eight years—since the congress of 1908. But this still leaves 19 counties which today have no hospital beds whatever for this disease. A year ago 5 counties voted a referendum to establish county hospitals, and this election 3 more voted likewise. Such a proposition has never failed when submitted to the people for decision by ballot. [Since this was written, two counties have decided to submit the hospital question to a referendum vote at the next election.] What does it mean to have 33 counties out of 57 with hospitals in operation or assured? We have set before us the task of providing a bed for each of the 5,400 annual tuberculosis deaths outside of New York City. Both experience and practice have shown this to be the best measure of a community's needs—its death-rate. We have in operation or assured today beds for 2,685—or 49 percent of the deaths—just one-half in eight years. And the counties which have made this brilliant progress contain 82 percent of the upstate population! We still have before us, therefore, the task of obtaining hospitals in 19 counties. These contain only 18 percent of the upstate population, but 51 percent of the annual deaths. If our past rate of development is maintained, we should have a hospital in operation in each of these 19 counties in just seven years more."

Dr. Eichel also urges the establishment of a tuberculosis division in the state department of health. Such a division was required by law in 1913, but no appropriations were made for it. The department was, however, granted $7,000 for tuberculosis work by the last legislature. In contrast with this are appropriations made by California this year—$75,000 for tuberculosis alone, in addition to state subsidies for county hospitals. Pennsylvania has over $1,300,000 annually and maintains sanatoriums and dispensaries throughout the state. Annual appropriations varying from $6,000 to $16,000 have been granted by Ohio, Kentucky, Virginia, Maryland, and other states. Michigan has voted its health department $100,000 for a two-year investigation and educational campaign. Minnesota and Missouri appropriate money for county hospitals. Virginia and Alabama have created tuberculosis commissions and the latter recognizes the principle of county hospitals. "But of all these mentioned," comments Dr. Eichel, "New York is the largest and richest, has the greatest tuberculosis problem, and the smallest appropriation, and this in spite of the fact that aggressive prevention would effect a direct saving of the $65,000,000 annual economic loss which the disease causes in this state."

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The War

There has been a general cry, especially in the daily papers, that the United States was unprepared for war. A careful and thoughtful consideration of just what has been accomplished in two or three months since war was declared, however, ought to impress one with the fact that if the country as a whole was unprepared for war, at least those whose business it is to be ready at all times for any eventualities were as well prepared as was possible, considering our form of government and the fact that Congress has held all the initiative.

The War Department, the Navy Department, and the Red Cross have been ready weeks ahead of Congress and have had to hold back certain of their final decisions and activities until the consent of Congress had been given and until the funds had been appropriated for the execution of the projects. It seems to us that it is a most favorable augury that the initiative has been taken by our trained permanent war organizations so quickly, with such assurance and calm decision, and the country is certainly to be congratulated that every move that has been made by the trained people in whom we have reposed confidence through all the years has been decisive, without any hesitation whatever, and has turned out well.

It seems to us that a country that could land as many men across three thousand miles of sea and two thousand miles of land and get them to the seat of war within thirty days from the time that permission was given for them to be sent could not be called unprepared. Indeed, the only unpreparedness that has developed in connection with this war has been on the part of the public and Congress, and, after all, neither Congress nor the public has to fight this war. It is the man in the uniform.

Of course, it is absolutely necessary for the country to be in hearty accord and in support of the purposes and plans of the war. This has evidently been the case, because, with a few notorious exceptions, Congress has been with the President and the country has been with the President, and Congress has done the obvious thing in giving to the President authority that must always go with responsibility. And now the country may fairly well feel that this war has to be waged by the Commander-in-Chief of the Army and Navy, who has all the necessary authority from Congress to do what he thinks ought to be done—and despite political inclinations and prejudices, what a wonderful feeling of satisfaction there is in every American mind that we have a commander-in-chief of the caliber and character of Woodrow Wilson!

One might dwell upon the wonderful rise of the American people to the necessities of this tragic and critical hour, the splendor with which every individual has stood up with an offer to do his or her part; but the sphere of each of us is so limited and the field of usefulness so small that we in the hospital field need only "stick to our knitting" to feel the same thrill of pride that every other element of our people must feel. Almost without exception, the hospitals of the country have risen high and have shown a breadth of patriotism and purpose and an intelligence that we had not felt or known about until now; the medical profession, which is inseparable from our hospital field, has answered the call by tens of thousands and only needs to be specifically designated to respond to almost the full extent of the professional strength. Our nurses are headed toward the battle fronts in France and Belgium, literally by thousands; indeed, American nurses have set the pace for the allied hospital agencies for more than two years and have won the highest honors for efficiency and devotion.

For years we have been weltering in wealth and ease, until at the time the great European war broke out there were doubts in many minds whether America had not gone back to a place

in history beside ancient Rome and Greece before their downfall. But the last few months and the historic sequence of events as they have affected us and as we have affected them make one glad again and hold up his head with pride to be an American.

The American Hospital Association Meeting in Cleveland

The American Hospital Association is to meet in Cleveland on September 11-14. There was a doubt in the minds of some of the leaders in the association for some time whether, on account of the war, the association meeting should not be abandoned this year, but deliberation has emphasized a greater necessity than ever before for the association to meet. Indeed, the Cleveland meeting must be made one of the largest, if not the largest, that the association has ever had, primarily for the reason that we are at war and that American hospitals are to be asked to do their part in a most specific and energetic way. It would be the height of folly for a hospital meeting to take place this year without practically all its activities being devoted to a consideration of the thought and purpose that is uppermost in the mind of every American citizen, namely, the war.

Just what has the American hospital to do with the war, it may be asked. Very much indeed. Before this next year is over there will be an organized army of American soldiers either on the battle fields of Europe or in training in this country for that purpose. An army of a million men will require a medical personnel of more than ten thousand doctors. If we have two million soldiers, twenty thousand American doctors will have been called to active service. By a wise provision of the War Department, these military surgeons must be taken from the young and the best of our medical men. Nearly all of this class of men are working in our civilian hospitals at the present time, or at least were until they were called into active duty. Nearly ten thousand of these men have been already commissioned and are only awaiting the order to don their uniforms and go to their stations.

Does this mean nothing to the hospitals of the country? It means very much, because every hospital from which some medical men are withdrawn will have to readjust its civilian activities to fill their places.

Moreover, the question of food and medical and surgical supplies is a most vital one, and the government is undertaking to mobilize hospital supplies of every sort and to place them under conditions that will embarrass the civilian hospitals as little as possible, and at the same time meet the obvious demands of the war.

Even before the war involved this country, prices for everything had gone sky-high and civilian hospitals were hard pressed to meet their obligations.

Already very much has been done by the Council of National Defense and the various government services to standardize hospital supplies. Nearly all the manufacturers of staple hospital commodities have been in personal conference with the medical board of the Council of National Defense, and some definite agreements have been entered into by which manufacturers have agreed to stop the production of those things that are not fundamentally essential to the care of the sick and to make only those things that are going to be in constant demand. Surgical instruments, gauzes, cottons, rubber goods, hospital furniture, sterilizers, and pharmaceuticals have been under this careful survey.

As a result of this consideration and careful study of these agreements, provisions are pretty well completed under which the vast quantities of supplies can be furnished for our own armies in the field, for the armies of the allies and for our own civilian hospitals.

But energetic cooperation and a thorough understanding of what has been done is absolutely necessary on the part of hospital administrators and boards of trustees.

At the Cleveland meeting a symposium has been arranged under the general topic of "Mobilization of American Hospitals for War." This symposium is expected to occupy most of two days, if not more than half the time at the disposition of the convention. The surgeon-general of the army, the surgeon-general of the navy, the surgeon-general of the public health service, the director-general of the American Red Cross, and Major Franklin H. Martin, chairman of the medical section, advisory board Council of National Defense, will participate either personally or by accredited representatives in this symposium.

This year it is not a question of the desirability or the advisability of hospital administrators or representatives of hospitals to be delegated by their institutions to attend the Cleveland meeting; it is an absolute necessity. Those hospitals that are not represented at the Cleveland meeting will lose their opportunity to participate in collective and coordinated action that will assure them all the advantages of cooperation and governmental support; they will be at the mercy of their isolated

and individual resources for obtaining what they need for the security of their medical and nursing staffs, and these disadvantages will cost them untold annoyance and vast sums of money.

Navy Hospital Plans

We are to have special opportunities, in the preparations for the war, to learn what the experts in the various government services know and think about hospital construction, equipment, and management. It is necessary for the men in these services to lay the greatest stress on workableness in their designing and planning, because they must think in terms of immense numbers of patients, and must plan so that the very highest order of service can be given to the greatest possible number at the lowest possible cost—which means also the lowest cost in administration.

It will stand the hospital people in good stead, therefore, to study the plans of General Braisted's emergency hospitals, published elsewhere in this issue. General Braisted, if he were not the head of the medical and surgical bureau of our great "first line of defense," might have had time to develop a very distinct leadership in our hospital field. As it is, it may be assumed that he has given personal direction to all war plans in the various branches of the naval hospital service.

In other pages also is an article by Passed Assistant Surgeon W. E. Eaton, of the Navy, on the transformation and equipment of what might be called ambulance yachts. Great numbers of these small vessels have been offered to the navy by private owners, and many of them are now in use along the coast in the work of transferring the sick from war ships to the hospital ships and to the shore—this work by way of training and preparation for a time when they will be urgently needed during and after sea battles.

Whatever may be said of unpreparedness in other services of the government, the medical and hospital bureau of the navy is ready for the war; and the plans by which this readiness was achieved are worthy of the very careful study of all Americans, and especially of the hospital people, whose work always lies along parallel channels, even if not on so great a scale.

Americanizing English Hospitals

The Metropolitan Asylums Board of London is a public body charged chiefly with the furnishing of hospital accommodation for infectious diseases. The institutions under the control of the Board employ a staff of over 4,000 persons.

War conditions rendered economy of food important and the Food Controller's regulations combined with this consideration to produce an inquiry into the feeding of this large staff. It was found that there were great variations in the per capita cost of feeding in different institutions and, independently of the cost, there was an undue variation in the quality of the food.

The first step taken by the Board was the establishment of a common menu to be used in all its institutions for four weeks at a time. Instructions were given and assistance afforded in the application of this menu. After the first period of four weeks, a return showing the consumption of the different articles of diet per head per day was circulated to all the hospitals, with a comment on the discrepancies disclosed. This practice has now become a monthly one, with the result that the more wasteful institutions are gradually approaching the standard of those more economically managed. Throughout, the quality of the food has been notably improved. This experiment resulted in the following savings of foodstuff during sixteen weeks, as compared with the quantities that would have been issued under the old dietary: Milk, 3,726 gallons; eggs, 43,112; tea, ¾ ton; sugar, 4½ tons; flour, 1¾ tons; and meat, 20½ tons.

The estimated total saving in money is $20,650. This saving was made notwithstanding the steady increase of prices throughout this period. Furthermore, it was a progressive saving, rising from an annual rate for the first month of less than $35,000 to an annual rate of about $100,000 in the fourth month.

The results of this experiment, while not directly applicable to conditions prevailing in this country, emphasize the efficiency, the economy, and the ease of working which result from standardization.

"But why the title to this note, since it is notorious that American hospitals are not standardized?" we hear some readers ask. Just so, but nevertheless, standardization of nearly everything else is an eminently American institution. In hammering at the need for standardization of our hospitals, we are merely urging the Americanization of American hospitals.

The Call for More Trained Nurses

The demand for trained nurses has been steadily on the increase for some years. This has been due to changes qualitative and quantitative. Qualitatively, new fields of application have developed, especially in social welfare work, while quantitatively, there has been great expansion in

every branch of the trained nurse's activities. The result has been a decided shortage in the supply, a shortage which, under the demand of war service, bids fair to become a famine.

While the United States Army is placed in an enviable position, second to none, by the foresight with which the arrangements of the Red Cross have been made, the drafting of the nurses necessarily involves a serious drain upon civil institutions. During the war period, there will inevitably be an immense demand for trained nurses. After the war, there is every reason to believe that social welfare work will receive a great impetus.

It is urgent, therefore, that immediate steps be taken to fill the gaps. It is not necessary, in this place, to labor the argument that the first-aid courses are of no avail for this purpose. What is needed is that college and high-school graduates should be encouraged to enter training schools immediately, and to take up nursing as a career. The propaganda must be intensive and it must be pushed in two directions. The personnel is to be recruited by campaigns in school and college and among graduates, while the training must be provided by the hospitals. As to the latter, much commendable work has been done, with the support of the National Emergency Committee on Nursing, in New York City, notably by the Mayor's Committee of Women on National Defense and by the Committee on Women's War Work of Columbia University. A number of the most prominent training schools in the country are cooperating in this effort.

Obviously, hospitals that expect to avail themselves of a propaganda of this sort and take advantage of this proposed nation-wide "drive" for pupil nurses, will not lose sight of the necessity to find proper housing and to make a congenial atmosphere for the young women secured.

Special War Number

This month's issue of THE MODERN HOSPITAL was intended to be specially devoted to eye clinics and hospitals and the blind and various auxiliary topics. But the whole country seemed to be clamoring for war news, and we were compelled by necessity and by a great clientele of anxious readers to change the subject of our special number and to devote this issue to the war and its many phases. We think we are giving some useful, timely, and exclusive information as to what is being done and how it is being done, and to that end we feel that those who are specially interested in the welfare of the blind and in eye clinics and out-patient departments will be lenient and forgiving. The symposium on the blind and eye clinics will appear in an early number.

We are publishing this month a great mass of interesting information about preparations for the over-seas war. We have some interesting matter from the Red Cross concerning the various medical and hospital units. We have two papers from the Navy Department, one from Surgeon-General Braisted, outlining briefly a plan for emergency hospitals, a great many of which have been already built, and a paper by Dr. Eaton on the transformation of pleasure yachts and similar small vessels as ambulance boats. We have an article about activities in the War Department, and various special items that ought to give us a pretty clear insight into what is being done and how it is being done, and who is doing it.

A very important paper on the Rockefeller Institute Base Hospital has been prepared especially for this number by Mr. Charles Butler, who, since writing it, has been detailed by our War Department to the French Ministry of War as an expert on hospital construction and who will go to the western front to supervise hospitals for the American army.

Another important and timely paper is that by Dr. Francis Carter Wood, of Columbia University, on Columbia War Hospital, a hospital of the standard base hospital (completely portable) type. As Dr. Wood suggests, it is possible that the experience gained in handling and working in these structures will be useful not only in the war, but also afterward in times of epidemics, etc.

We wish to call attention also to an article on the valuable work in war orthopedics of an American woman, Miss Grace Gassette, who has put the knowledge of anatomy gained in her art studies to new and surprising uses. As indicated in this article, the greatest need of Miss Gassette's committee is for funds. Checks to aid in this most laudable work may be made payable to E. Norman Scott, Administrateur délégué, 17 rue Boissonade, Paris, or American Relief Clearing House, 5 rue Francois—I, Paris, and may be sent direct to either of these addresses. They should be designated "as for the Franco-American Corrective Surgical Appliance Committee."

Hospital Buying

On another page of this issue will be found a short paper on hospital buying, by Mr. M. L. Reid, of San Francisco. We must commend this paper to our readers; it is very much worth while on a highly important subject, and will be of great interest to a good many administrators.

THE FRENCH MILITARY HOSPITAL SYSTEM

Route Taken With the Wounded—Shelter for the Wounded, Advanced Dressing Station, Field Hospitals and Base Hospitals—Type of Hospital Devised as a Model

All France, says Mr. Charles Butler in a recent article, is divided into two parts, the army zone—and the rest. The zone is a strip, on the average 30 miles wide parallel to the front, into which one penetrates only by the permission of the grand quartier général. In this zone lie the front-line hospitals, ambulances, dressing stations, etc.

The grouping of these services is about as follows: In the front-line trench is what is known as the *abri du blesse* (shelter for the wounded), a hole in the side of the trench, where the wounded man is put to get him as much as possible out of danger till he can be moved to the advanced dressing stations (Fig. 1), which lie 50 yards or so behind the front-line trenches. This dressing station, or *poste de secours*, is presided over by an assistant surgeon, probably a medical student when war began. From the dressing station, which is always under ground and contains perhaps a dozen bunks, the wounded man is transported, as soon as the firing slackens sufficiently, through the *boyau*, or communication trench (*boyau* means bowel, and the convolutions of the communication trench for the purpose of localizing the effect of bursting shells fully justify the name), back to the battalion dressing station, perhaps a mile away.

It can be imagined just how painful is the trip through this mile of winding trench. Various types of stretchers are used, perhaps the most satisfactory being the hammock stretcher hung from a pole carried on the shoulders of the bearers and more easily maneuvered in the winding trench than the ordinary side-pole stretcher. There are also chair stretchers for seated cases, etc., but any way you take it, it is a hard trip for a wounded man.

At the battalion dressing station is a full-fledged surgeon and there are facilities for operating—as always, under ground. This dressing station is generally accessible for motor ambulances, at least at night.

The French medical corps has devised a most ingenious unit for use in connection with the ambulances—what is known as the *ambulance chirurgicale automobile*. This consists of a unit construction portable building, comprising a waiting room about 10 by 16, a sterilizing room about the same size, and an operating room about 20 by 16, all of which can be packed on two motor trucks. Another truck contains a very complete sterilizing outfit, a fourth the x-ray equipment with electric generator, while the fifth serves for general supplies and transport of personnel.

These buildings are now being erected with double walls and steam heat, and can be quickly transported to the point on the front where they are most needed.

The field hospitals, in which men can be cared for who need a few days' treatment before being sent on to the rear, lie a little further back.

These are a cross between the ambulances and the base hospitals, and are either in existing buildings, in tents, or in portable house barrack buildings, but more and more in barracks and with more and more of the conveniences and comforts of the base hospital.

Back of the field hospitals lie the great centers, such as Revigny and Bar le Duc back of Verdun, Belfort in Alsace, Bray and Amiens in the Somme, where the wounded are counted by thousands instead of by hundreds and where the final sorting out is done.

At Bray the group contains 3,500 beds, divided into a hospital of 1,000 beds for the seriously wounded who are not transportable, a *depot d'eclopes* of 1,000 beds for the slightly wounded and slightly ill, and an evacuation hospital of 1,500 beds for those who are to continue to the rear on hospital trains.

The hospital proper is of the unit construction, portable-house type, equipped for giving first-class surgical treatment.

Mr. Butler was asked to design a hospital of this type to be erected at Vincennes, just outside of the gates of Paris, as a model (Fig. 2).

The plan which he prepared for Dr. Carrel was based on his theory that it should be possible, by isolating a hospital, to place it much nearer the front than had been done in the past—in other words, to build a hospital equipped to give first-class treatment within five miles or so of the lines. This plan, though never executed, has served as a basis for the plans of many other hospitals.

The special requirements of war hospital planning, he says, are:

1. Reduction of road building to minimum.
2. Complete intercommunication between buildings by wheeled cars, patients, food, linen and supplies of all sorts being carried on wheels and all buildings connected by galleries uninterrupted by steps.
3. Grouping of administration, technical and general services for easy communication and supervision.
4. Grouping of wards for easy service and with proper north-south orientation, and south end unobstructed.
5. Grouping of dwellings for staff, nurses and orderlies for convenience and supervision and with sufficient separation from patients' quarters.

Photograph from Underwood & Underwood, New York.

Fig. 1. An advanced dressing station on the Aisne front in which the wounded receive emergency treatment before being taken to the field hospital. These dressing stations are always under ground; this one is scooped out of the solid rock.

The plan for the permanent military hospital at Issy-les-Moulineaux (Fig. 3), in its general scheme of arrangement, follows the line of war hospitals, but is executed in permanent materials. The general plan for a typical base hospital shows the result of the work of Mr. Butler's committee in France as adapted to American requirements (Fig. 4).

The details of the plans follow in general the ordinary practice, with the necessary modifications to fit military

needs. The reception building in its present form is, however, a very definite product of the war. As it must be assumed that every wounded man is filthy, even though not necessarily vermin-infested, it is essential that he be thoroughly cleaned before being admitted to the ward. In the center is the receiving room into which the ambulances discharge their loads. In this room the surgeon on duty makes a hasty examination, picking out those most needing prompt transport to the wards. They are then taken in order into the wash-up room, where their pedigrees are taken, their valuables checked and where, after receiving their ward assignments, they are cleaned in the table baths, put in clean hospital clothes and wheeled away to bed, while their soiled clothes go to the disinfecting plant. After being washed, disinfected, and repaired, their effects return to the building for storage, where their records and valuables are also kept.

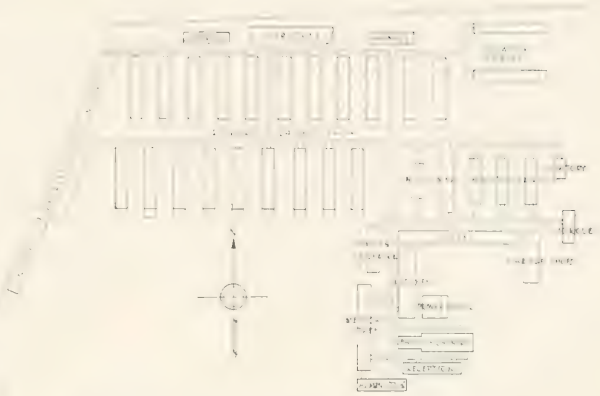


Fig. 2. Plan for 500-bed base hospital, Vincennes, Paris, France.

Fig. 3. Permanent military hospital at Issy les Moulineaux, France.

When the wounded man is finally convalescent and ready to be discharged, he comes back to this building, turns in his check and receives his uniform and personal possessions, and after signing off is discharged.

The advantage of concentrating in one building the receiving and discharging of patients, together with the filing of their records and the storage of their effects, is obvious.

The operating pavilion is naturally of especial interest in a war hospital. There are two entrances, one being reserved for patients, while the other permits the orderlies to reach the dressing preparation room and secure their provision of sterilized dressings for the wards without penetrating into the rest of the building.

In view of the fact that much of the linen and clothing is contaminated, the laundry has two receiving rooms, one for ordinary soiled linen and one for linen, clothing, mattresses, etc., requiring sterilization; these pass through either the sterilizing washer or the steam and formaldehyde sterilizer into the laundry proper, where they join the other linen and are thenceforth treated no differently from the rest.

The ward buildings, containing each twenty-four beds in the open ward and one in an isolation room, show the consistent development of the war hospital towards the standards of civil practice.

Base hospitals are being planned more and more with sewage disposal systems, and in the case in point, complete service is provided, with toilets, bedpan and housemaids' sinks, lavatories, kitchen sinks, etc. As relatively few wounded can be bathed in the ordinary tub, there are no bath tubs in the ward buildings, but instead a small central bath house is provided, thus materially reducing the expense.

An isolation room is provided in each ward unit, also a surgical dressing room, diet kitchen and nurses' office and linen closet.

Following the custom of civil hospitals, the wards are oriented north and south, and the south end is

Fig. 4. General plan for base hospital adapted to American conditions. Butler & Redman, Architects.

composed entirely of windows so as to permit the greatest possible amount of sunlight to enter. At this south end is placed, on a level with the ward, a terrace, onto which the beds may be wheeled in clear weather, for experience has shown that fresh air and sunlight are as good for wounded as for tuberculous patients. The beds must therefore be provided with large rubber-tired casters, to permit easy rolling.

A large recreation building is provided, which may also serve as convalescent mess. It must be borne in mind that in the average war hospital there are many men who, except for a local wound, are quite well and active, and who would be difficult to handle if provision were not made for their distraction in a building specially set apart for this work, usually divided into reading room and room for games.

The French authorities have solved the problem of drinking by providing a canteen, at which each convalescent patient may buy drinks to the extent of one drink per day, a simple method when there is but one source of supply. No treating is allowed.

Almost as important as the planning of a base or field hospital is the choice of material and type of construction, and here we have much to learn from the experience of our allies. On the British and French fronts, portable house unit type construction is employed almost to the exclusion of other types, the theory being that these buildings will pretty certainly be moved at some stage of their career—there is also the thought that the unit construction building may be of service after the war for temporary use in the regions so completely devastated in France and Belgium. There is no idea of using portable-house construction so that hospitals may be taken down and reerected in three or four hours, as some manufacturers claim that these buildings can be, but it does seem advisable to use a type of building which may be transported and reerected if desired.

The English, French and Belgians have all worked out types of buildings which are far superior in their practical workableness to any of our types. This is natural, in view of the fact that these countries are erecting buildings of this type not by hundreds but by thousands, but it would be well if we could learn from their experience and avoid their mistakes.

While in general these buildings are heated by stoves, in many steam heat is being installed; some have plumbing, and all electric light.

A necessity for wooden buildings is an efficient layout of water supply to hydrants in ample number, for the buildings will burn quickly, and the German aviator is notoriously careless in the matter of distinguishing hospitals from armed camps—perhaps it is kinder to say that he is forced by the allied airman to fly so high that he cannot distinguish the red cross painted on the roofs of some of the buildings of every hospital.

Mr. Butler's paper appears in a recent number of the *Architectural Forum*.

Contract has been awarded for the first wing of the proposed Bay Ridge Hospital, Dispensary, and Training School for Nurses, Brooklyn, N. Y. This building will contain about sixty beds and a number of private rooms. The cost, including equipment, will be approximately $135,000. Since the hospital organization was formed in 1904 it has maintained a dispensary at Sixtieth Street and Seventh Avenue, where free treatment has been given to thousands of persons every year. Dr. Rollin Hills is at the head of the medical staff.

WAR STIMULATES WORK IN MASSAGE

Schools at Guy's Hospital and Other Places Flooded With Applicants—Pupils Taught Thoroughly

During the past two and a half years, in direct consequence of the war, the practice of massage has made greater progress in Great Britain than at any previous time since it was revived in this country, remarks a writer in *The Hospital*, London. Naturally, the treatment of many thousands of wounded soldiers in many cases demanded the employment of massage. Many schools of massage had to be expanded quickly to cope with the unprecedented rush of students. There are now a number of schools throughout the country, some privately owned and others in connection with voluntary hospitals, where massage is taught on scientific lines.

The school at Guy's Hospital is declared by the writer in *The Hospital* to be one of the best examples of an institutional school. The building includes a gymnasium, a massage-room and three class-rooms. About fifty students are now in training for the different examinations of the Incorporated Society of Masseuses, which are held every three months. The necessary apparatus has been specially designed for the school and made in the work department of the hospital. One department is devoted to the treatment of less serious cases, stiff joints, fractures, dislocations and the like; here students taking the elementary course are trained. In another department more complicated diseases are treated, such as cases of nervous diseases, scoliosis, rheumatism, gout, and circulation disorders. Advanced pupils and those taking the course of Swedish remedial exercise receive instruction here. Lectures on anatomy are given four days a week. Weekly lectures are given on physiology and on medical pathology, with clinical demonstrations in selected cases, and surgical pathology. The minimum length of the course is six months, and the certificate for Swedish remedial gymnastics may be gained in another six months, although a year is strongly advised.

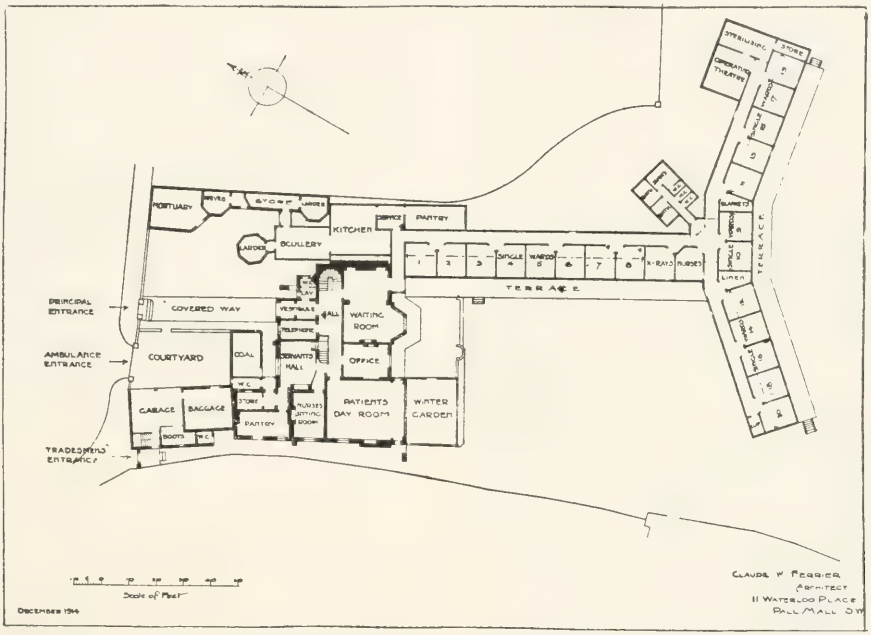
ECONOMICAL FEATURES IN THE CONSTRUCTION OF A TEMPORARY WAR HOSPITAL

Wooden Construction With Wall Linings of Asbestos Reduce Expense—Maximum Amount of Sunshine Obtained for Each Ward

Mr. Herbert J. Paterson, honorary surgeon in charge of Queen Alexandra's Hospital for Officers, in the June *International Journal of Surgery*, describes the treatment of the wounded at Queen Alexandra's Hospital and also a number of the features of construction. The hospital is situated in grounds of about three acres, within which stands an old house which has been adapted to the use of the nursing and domestic staff. The hospital proper is a new building constructed of wood foundation with wooden piles, in the form of a modified letter "Y" connecting with the old house. The new building contains the wards, operation theater and sterilizing room, ward kitchen, x-ray room, sanitary annex, kitchens and scullery. Being intended merely for temporary use during the war, it has been constructed as economically as possible with due regard to efficiency, but without frills. Each ward measures 12 feet by 10 feet 6 inches, and is 10 feet 6 inches in height, giving 1,300 cubic feet of air space for each patient. The walls are lined with sheets of asbestos painted a light French gray. The doors are made of rough, unplaned deal, covered with brown linoleum, fixed by brass-headed

studs. Instead of a door handle a large brass dress hook is fixed on each side of the door where the door handle should be. A nurse carrying a tray can open or shut the door by placing her forearm in the hook and drawing to or pushing open the door. This ingenious idea of the architect, Mr. Ferrier, has worked excellently in practice, and effected a considerable economy in construction. The doors as constructed cost far less than painted doors would have done, and, being smooth all over, are very easily kept clean. All the wards open on to a wide veranda, access to which is gained by a French window wide enough to allow of the beds being readily wheeled outside. Thus the worst fracture cases can be moved into the open air and many of the patients sleep outside when the weather is favorable. The floor is covered with green linoleum, and the corridor floor is covered with the same material with a thick padding of dried grass underneath, which effectually deadens sound. By means of an outside green blind the room can be darkened if desired. In the summer, by fixing these outside blinds over a tight wire rope, the whole veranda can be completely covered in. The hospital was built in the shape of the letter "Y" in order that each ward should obtain the maximum amount of sun possible. If during the day there are ten hours of sunshine, each ward obtains about eight hours of it.

At the junction of the three corridors is the nurses' duty room or ward kitchen, in which the nurses sit during the quiet intervals of their working hours. It contains a small gas cooking stove, shelves and cupboards for medicines. In a felt-covered box above the ceiling of the duty room are placed the electric bells, by means of which the patient summons his nurse. From this box extend four megaphone tubes, one opening into each corridor and one into the duty room. By means of this device the bells are clearly heard in the corridors and in the duty room, but are almost inaudible in the patients' rooms. Each group of four rooms has a different-toned bell or buzzer, so that when any bell rings a nurse can tell at once whether it is one of her four patients who requires assistance. Outside each room is an indicator which flies open when the bell of that particular room is rung, so that the nurse can see, on looking down the corridor, from which of her rooms the bell has been rung. In addition to this there is an indicator in the duty room containing a number of black and white discs corresponding with each group of rooms. When a bell is rung the disc appropriate to the block of



Courtesy of the International Journal of Surgery.

Queen Alexandra's Hospital for Officers. The plan includes the old building adapted for the accommodation of the nursing and domestic staff and the new building constructed in the form of a modified "Y."

rooms oscillates for four or five minutes. Next to the duty room is the radiography room, containing a complete and modern x-ray installation. When not required for radiography purposes, the room serves also as the sisters' sitting room. Outside of the duty room and separated from the corridor by a well-ventilated lobby is the sanitary annex, containing two bath rooms, two water closets, a sink room with washing and flushing sinks. At the end of the southeast corridor are the operation theater, sterilizing room and surgical store cupboard. The theater measures 18 feet by 14 feet, and, like the wards, is lined with asbestos sheets. It has a large window facing north, and a smaller window to the west, while for night work there are four 100-candle-power electric lamps. The incoming air is warmed by being passed through two shafts containing steam radiators. Adjoining the theater is the sterilizing room, containing a large high-pressure steam sterilizer, a large caldron boiled by steam for sterilizing bowls, trays, etc., a water sterilizer, and an instrument sterilizer.

Fire alarms and fire extinguishers are fixed at various

points, the positions of which are indicated in plans posted throughout the hospital. Fire drills for the staff are held regularly, and occasionally a real fire is manufactured in the grounds so as to make sure that the staff understands the working of the extinguishers.

THE FUTURE OF DISABLED SOLDIERS

Recommendations of the Conference Called by the General Medical Board of the Advisory Commission of the Council of National Defense

A conference organized from among groups of specialists having knowledge of the various problems likely to arise in the reeducation of disabled soldiers was called by the General Medical Board of the Advisory Commission of the Council of National Defense on June 22. The membership of the conference was as follows: Dr. James Bordley, Jr., Baltimore, representing ophthalmology; Dr. John Staige Davis, Baltimore, plastic surgery; Mr. C. R. Dooley, Pittsburgh, vocational education; Dr. S. I. Franz,

Copyright by Underwood & Underwood, New York.
Fig. 1. German armless soldier farming.

Washington, D. C., neurophysiology; Mr. F. B. Gilbreth, Providence, R. I., management engineer; Dr. R. W. Lovett, Boston, orthopedic surgery; Dr. Harris P. Mosher, Boston, otologist; Dr. T. H. Weisenburg, Philadelphia, neurology; Dr. W. A. White, Washington, psychiatry; and Dr. Edwin W. Ryerson, Chicago, orthopedic surgery. The findings and recommendations of the conference were submitted by the chairman, Dr. Franz, to the general board on June 24.

Among the recommendations of the committee were the following: that reeducational activities begin as early as possible, and that special treatment of the wounded be carried on under the direction of specialists; that reconstruction hospitals or hospital schools be established; that disabled soldiers be kept under military discipline until their physical reconstruction and reeducation is complete; and that a committee, containing representatives of the various medical, educational, and social interests concerned, including representatives of the army, the navy, the U. S. Public Health Service, and the American Red Cross, be appointed to carry out whatever plans may be adopted.

Following is an abstract of the report made by the chairman of the conference, Dr. Franz, in presenting the recommendations of the conference:

The importance of the work looking toward the rehabilitation of the maimed and crippled, using these two terms to cover the great number of different kinds of defects which have been produced, is being appreciated more and more by the Belgian, English, and French governments, and by the special physicians and others who have been compelled to deal with certain of the problems.

As the result of previous wars and of accidents in industrial pursuits, numerous crippled and maimed have been produced. Except in relatively few cases these individuals have been permitted to bear their infirmities as well as they could, and the burden of their support has fallen on their families, or on the state if they became social parasites, beggars, and the like.

In many cases these individuals have gravitated to the poorhouses or to special homes for the crippled, where they have been supported mostly in idleness. Now, however, it is being appreciated that great effort, and as concerted as is possible, must be made to limit the parasitic conditions, and to make these relatively incompetents as competent as possible. For the general welfare of the nation as a whole, for the comfort and the well-being of the individuals, a *laissez-faire* method of dealing with them cannot, and should not, be tolerated.

Statistics are not available regarding the number of those who require special treatment of the nature of reeducation. That the number is not a small one, and that in case the war continues for any length of time for our troops, the number will not be small in these United States, are evidenced by the efforts which are being made in the countries which have been at war for nearly three years to bring about a medical and public appreciation of the conditions.

Borne has divided these individuals (and has grouped with them certain others) into three general classes:

1. Those who, with immediate care, can be made almost perfect. (This group includes those who have been operated on, but who have been compelled to remain quiet and almost motionless, and who consequently have also suffered from muscular atrophies and ankyloses. Here also come the tendon retractions, the defects which are due to adherent binding cicatrices, etc. In some cases it may take as long as six months to get an individual of this class normal, or approaching his normal condition. Many of these individuals have been incapacitated in the manners mentioned because of lack of appreciation of the possibilities of the production of such defects.)

2. Those who are definitely educable, or who are readaptable to work of some kind, but who cannot return to their former occupations on account of the defects which have been produced. (The class includes all those who have lost a part of their body, such as a hand, or foot, or arm, or leg, or even one or more fingers. In these cases after surgical interventions, amputations and the like, it may take only three or four months to make the individual as nearly normal as he can be made. This includes, of course, necessary orthopedic appliances.)

3. Those who are so severely and extensively mutilated and infirm that nothing can be done for them. (Relatively few of this class will exist. Some of those now thought to be incapable of training will be found to be amenable to some kind of treatment, and this is one of the problems which will need to be considered. Those who cannot be benefited by treatment of any kind, educational or otherwise, will probably have to be kept as permanent wards in special institutions or in homes for disabled soldiers.)

It has been estimated by Amar that if proper and prompt treatment is available 80 percent of the whole number are reeducable. Some of those who are not counted in this classification will probably be dealt with in

special institutions where they may also be educated. This is true of the blind and the deaf. Of the total which he considers educable, Amar also counts that at least three-quarters may be unconditionally returned to some kind of gainful occupation and to useful social life, after they have been given the training which their conditions warrant. The remaining quarter can be instructed in certain occupations, and can carry them out for such a period of time, that will enable them to be useful although their physical conditions may make them very slow in performance and may prevent their active competition with more normal individuals. For this last class, therefore, special workshops may be required, special positions may need to be sought, and some may need special permanent care.

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Fig. 2. Disabled Russian soldiers learning to make a living by working on leather goods.

Already in France and in England much work has been done with the maimed and crippled, as has been said, and the kinds of occupations which have been undertaken by these defectives are numerous. Besides farming and horticulture, for which many have special aptitudes and previous special training and for which their infirmities are not prohibitive, the following occupations have been taught, or retaught, to certain individuals: clerical work, stenography and typewriting (with the necessary instruction in writing, drawing, geography, arithmetic, commercial law, important languages besides the native language), carpentry, wood turning and carving, tailoring, brushmaking, basketmaking, shoemaking, bookbinding, trussmaking, making orthopedic appliances, locksmithing, making chains, making mats and rugs, making playthings, working in wood and iron in making articles for ornaments, plastic arts.

It will readily be seen, therefore, that a considerable number of occupations are open to those who have been maimed or crippled, and that many more will be found in our industrial establishments there is no doubt. In the selection of an occupation there should be considered carefully the tastes and the previous aptitudes of the individuals, their past occupations, the degree of education, and great care must be exercised that caprice is not given sway, so that an individual select such an occupation that it is inconsistent with his infirmity and that, if not entirely consistent, it is so time-consuming that the cost of reeducation is out of proportion to any expected gains that the individual may make subsequently. In many cases also it is necessary to limit the kinds of occupations from which selection may be made, for certain occupations may tend to increase an existing infirmary, such as a contracture or a laxity of an articulation, which cannot be corrected.

Rochard has criticized the conduct of the reeducation work in France, because of the lackadaisical methods which were used at the beginning. The corrective apparatus was badly conceived, awkward and not effective for its purpose in many cases, and due regard was not paid to the individual. It is important that each individual be considered as an individual, and that he be treated with that kind of mechanotherapeutic measure that will be best fitted to his particular needs, and at the same time that if any corrective apparatus is needed this should be considered in relation to the occupation that the individual is to undertake as a matter of rehabilitation and also in relation to the defect which is present.

Perhaps no better general outline of what is needed can be cited than that of a commission of the Royal Society of Medicine, which has recommended as follows:

1. A service of physical treatment, consisting of hydrotherapy, electrotherapy (including roentgenotherapy), mechanical treatment, medical gymnastics, and massage, should be made available at the earliest possible date for all soldiers needing it who are disabled by war. 2. Centers of physical treatment, comprising all the foregoing methods, should be established throughout the country on an adequate scale, and wherever possible in association with general hospitals, so that other forms of special treatment and diagnosis may be readily available. 3. At such centers there should be a uniform system of measurements and records. 4. Centers of reeducation and centers of physical treatment should be closely associated.

In any consideration of the general matter of reeducation and rehabilitation one matter must be given due attention, viz., the placing of the men after the reeducation has been completed. It would be a waste of time and effort if such individuals were reeducated and they were refused by the public to take advantage of their possibilities. The organization of the work must deal with these matters, and perhaps with such other things as are being considered in France, like mutual societies, organizations, and cooperative endeavors for the general benefit of the members. And propaganda for the popularization of the work of these men, for their utilization in a variety of ways, should not be too lightly considered.

HUGE TASK OF PREPARATION FACED BY THE WAR DEPARTMENT

Five Thousand Examining Physicians to Be Needed to Examine Recruits Besides Those Needed for the Front and for Home Service—Apotheosis of Preventive Medicine at Hand—Our Trained Men Are Ready

The huge numbers in which we deal when we talk about the participation of this country in the European war are staggering and almost inconceivable. We have become rather accustomed to dealing in hundred of thousands and millions when discussing European armies, but those have been almost academic discussions and those huge figures have never meant to us the lives of our own friends and relatives, and fellow Americans. Now the discussion changes, and we are come to a point where we must think in terms of brothers and husbands and fathers, and to associate with them the horrors of the trenches, the winter colds and summer heats, infernos of fire, noxious gases, barrages of artillery metal, hundreds of miles of subterranean caverns, and thousands of miles of fighting fronts.

Our own war department has a huge job on its hands; it is proposed to organize at once an army of 687,000 men,

and this in addition to the half million or more already organized in the regular army and national guard.

To create this army of three-fourths of a million of men means that perhaps three millions will be drafted. These three millions of men will have to pass the exemption boards; then those who remain will have to be examined and recruited into the new army. It seems almost staggering to think of what this recruiting business means if it is to be done promptly and effectively. A medical officer, if he is persistent and works a long day, may be able, with the help of a clerk, to examine twenty men. If we were to plan to recruit 680,000 men in the thirty days and to examine three millions of men in order to obtain the requisite number, assuming that one doctor could examine and make out the papers for twenty men in a day, it will take five thousand doctors a month for these examinations alone, and it must be understood that the work of every one of these examiners must be passed on by at least one review board.

But the Surgeon General of our War Department is planning to do very much more than this, and to give a completer examination and make a more thorough inquiry into the physical condition of the men than would be possible, relying on these boards aggregating five thousand general practitioners in our civil profession. All of the warring nations have had terrible ravages from tuberculosis, due to the hardships of the trenches and exposure. It is proposed for our army that these ravages shall be reduced to their very minimum, and to this end orders have been given appointing large numbers of specialists in tuberculosis who are being rounded up at the various concentration camps over the country and whose duty it will be to make careful examination of the lungs of every man who has already been accepted by the general medical boards, with a view to determining whether there are any conditions that point to the likelihood of the soldier breaking down under the pressure of a hard campaign, with pulmonary or tuberculous troubles.

The soldier's life is that of the hardest-tried athlete, and our athletic regime is hard on the heart. Medical boards are instructed to make careful examination of the hearts of all candidates for admission to the army, but in addition to that the surgeon general has organized many groups of highly trained heart specialists; these men also are to be located at the concentration camps for the purpose of specialized inquiry into the heart conditions of the men who have already been accepted by the general boards.

There are eye specialists and ear and nose and throat specialists connected with every examining board in the country, and diligent and searching inquiry is made into condition of candidates in regard to the eye and ear and respiratory passages.

If all this means anything, it means that the American army, when it leaves our shores for the battle fronts of Europe, will be the most scientifically picked and carefully selected, and the finest group of young men that has ever been sent to war.

Not only are we to send our very best young men to the war, but we are to take care of them when they are there. The best architects in the world have been busy for years in an attempt to determine the best construction material and arrangement of barracks and concentration camps, taking into consideration not only the comfort of the men and the sustaining of their fighting condition, but also the prevention of every conceivable disease. There is no doubt that in the American camps in Europe preventive medicine, thanks to the lifelong specialization of the Surgeon General of the Army, will attain a higher level than preventive medicine has ever attained before, anywhere or under any circumstances.

It is almost certain that the diseases from which soldiers have died in our wars in the past will be non-existent in our armies; typhoid fever, which devastated our armies during the Spanish-American war, is now under absolute control and every enlisted man, every officer and every nurse who goes to the front in this war will have been immunized against typhoid.

Cerebrospinal meningitis, which, thanks to Flexner and Jobling, have been rendered almost harmless by reason of an antimeningitis serum, is guarded against by immense quantities of serum, with preparations for keeping it in the base and field hospitals of Europe. Smallpox is taken care of by the vaccination of all troops and auxiliary personnel. Typhus fever, so prevalent in Serbia and the Balkan states last year, is provided against to a large extent by the sanitation prepared for our camps, by bathing and laundry facilities that will make it almost impossible for the source of infection, the body louse, to make any headway.

Our War Department long ago had its plans complete for the building of sanitary cities for the occupancy of our soldiers at the front in time of war. These plans have been changed and kept up to date and are now as complete and as scientific as human skill and scientific knowledge can make them. They call for construction and material of the best calculated to insure the health of the troops. They call for plumbing, steamfitting, pure water, good sewerage, and surface cleanliness of every description.

This war is to settle for all time the safety of all peoples against autocrats and divine-right rulers, but it is to do more than that—it is to bring the world very far forward in preventive medicine, in the scientific application in a large way of principles that have for their object the public health. We can see every day that this war is going to be worth all it is costing and will cost.

A SPRING NIGHT IN A BRITISH HOSPITAL IN FRANCE

The Humdrum Routine of Night Life in St. John Ambulance Brigade Hospital at Etaples, France

Miss Amy E. MacMahon, night superintendent of St. John Ambulance Brigade Hospital, Etaples, France, in a recent number of the *Johns Hopkins Nurses' Alumnae Magazine*, describes a specimen night in that hospital. During the day, she says, orders come to evacuate a large number of patients and to put four more beds in each ward to bring up the capacity of the hospital to 600. She is informed that a convoy of 120 patients, 100 lying and 20 walking, is due at seven-thirty that night. That means that the eighteen night sisters will have to take charge of this assignment, probably at eight o'clock. The beds are prepared for bed baths, and though the weather was warm, hot water cans are filled. A number of serious cases are expected, as the clearing hospitals are sending down many of their worst cases. Tourniquets, hypodermic outfits, a stove for boiling water, the dressing carriage, the instrument kettle, etc., are in preparation, for the night sisters soon learn that they must be ready for any emergencies. By the time the first of the convoy arrives the commanding officer of the hospital or his representative is on duty, for he watches the unloading of every ambulance, each of which carries four stretchers. The stretcher-bearers carry their patients into the admitting room and the medical and surgical officers order unconscious, delirious or very ill

patients taken directly to the ward. The other patients are asked a few necessary questions and a tally, stating ward or destination, is pinned to the front of the patient's tunic or pajamas. The stretcher is then placed on trolley wheels and taken to the ward by a covered sidewalk.

This covered walk, Miss MacMahon remarks, accounts for the hospital having received far more than its share of serious cases. Since a Zeppelin raid, however, lights in these covered walks are shaded and are turned on only when the stretchers are going to and fro. In the ward only two or three lights are turned on and these are shaded. When the patient is taken to the ward the sister in charge verifies the assignment as to ward and number of bed, feels the patient's pulse, examines dressings, asks a few questions and leaves the other details until the orderly has given a bath. In the case of a patient whose dressings are not in good condition, note of the time and the pulse is taken and the patient is asked for his home address. In the case of a patient whose condition is growing worse, the sister writes a note to the doctor and asks him to let her know if he wishes the operating room nurse called. Walking cases are given baths in the admitting block and are put to bed.

At twelve-thirty there is an opportunity for the busy nurse to eat something, and this is necessary, for another convoy is to arrive before the five o'clock evacuation takes place. This convoy consists of 100 patients of bed cases and they arrive at two o'clock. An emergency case requires the tying of an artery, application of dressing and a dose of morphine. At four o'clock the patients who are to be evacuated must be wakened. This they do not mind when it means a trip to "Blighty" (England). While the orderly is disinfecting the beds of the patients who have just gone, the sister prepares a dressing carriage, for as the ill patients wake she must wash them, dress many of their wounds and make their beds. At six o'clock those who have not already been washed by the sister or orderly must be wakened, medicines must be given, and all temperatures and pulses taken and charted before breakfast. The charts of the new patients must have names, etc., filled in, any report must be ready, service rooms must be tidied, and the floor must be swept before the day sister comes on duty. At eight o'clock it is time to go down to the sisters' mess for dinner, served at eight-twenty.

A SURVEY OF NURSING RESOURCES

New York City Takes Steps to Organize the Nursing Field For Defense—Example to Be Followed Throughout the States

In April of this year Mayor John Purroy Mitchel, of New York City, appointed a Committee on National Defense consisting of about seventy-four women interested in various kinds of work throughout the city. Mayor Mitchel expressed the desire that the work of all women's organizations engaged in activities for war emergencies be registered with this committee. This central committee appointed several standing committees, among them a standing committee on nursing, of which Miss Annie W. Goodrich is chairman and which selected as its first and most important piece of work a survey of the nursing resources of the city. A full-time secretary was appointed for the purpose of completing the survey in three months. The purpose of the survey was to find how many persons in New York were engaged in different classes of nursing service, as well as in the various nursing specialties.

To get in touch with every New York organization concerned with nursing service, it was decided to use a questionnaire, and to develop four forms, for the four types of organization concerned with nursing service, namely, institutions (hospitals, sanatoriums, "homes," reformatories, and day nurseries), public health organizations, nurses' registries and nurses' organizations. The forms for institutions request data on the various departments (medical, surgical, gynecological, orthopedic, etc.), and also on the class of service (superintendent, supervisors, and charge nurses, post-graduate students, nursing sisters, social service nurses, pupil nurses, trained attendants, attendants in training, practical nurses, orderlies, and nurses' aids). The questionnaire on public health nursing specifies the following divisions of work: administrative, supervisory, office work, general visiting nursing, prenatal, obstetrical, post-partum, infant welfare, school, contagion, tuberculosis, mental, social service, and industrial. A similar questionnaire was addressed to nurses' registries. In each case the organization addressed is asked to specify the number of male and female graduate (registered and non-registered) nurses, trained attendants, practical nurses, and nurses' aids in each specialty. The nurses' organizations were requested to give their membership. By the aid of Dr. Haven Emerson, the commissioner of health, and others a list of organizations concerned in nursing service was compiled.

It was decided that, although each set of forms should be sent out complete in itself, hoping for a quick response, each organization engaging any appreciable number of nurses should also be followed up by telephone. An appointment was made and an enumerator was sent to go over the form with the nurse in charge to see that it was correctly filled out.

These enumerators were selected from the body of volunteers, who were also nurses and were procured through the nursing organizations, the presidents of which were members of the committee. For the convenience of these enumerators the mailing list was divided into five boroughs. Into a map of each borough were stuck colored-headed pins, indicating the different divisions—first, hospitals and sanatoriums; second, other institutions; third, public health nursing; fourth, nurses' registries; fifth, nurses' organizations. The pin map proved quite necessary, in order to decide how to divide the territory of these huge areas so that the nurses should not waste any more time than possible on the road. The enumerators were very carefully instructed in the meaning of each part of the questionnaire. They thoroughly understood the purpose of the whole investigation and were thus able to give efficient service.

The entire cost of the census was $1,500.

A similar survey of the nursing resources of the various states has been authorized by the National Emergency Committee on Nursing, which has recently been made the nursing committee of the general medical board of the Council of National Defense. This state survey is to be made through the American Nurses' Association.

Miss Harriet B. Leach, of Minneapolis, assumed the duties of superintendent at the Milwaukee Maternity Hospital July 15. Miss Leach is well known in the north, having served at different times both as president and secretary of the Minnesota State Board of Nurse Examiners. She is a graduate of a New York hospital and was at one time head nurse at the New York Lying-in Hospital. More recently she has been connected with the Swedish Hospital in Minneapolis.

RECONSTRUCTION HOSPITALS FOR PROSPECTIVE RECRUITS

Philadelphia, New York, and Chicago Hospitals Undertaking the Rehabilitation of Prospective Recruits With Slight Physical Defects

We have known all along that American hospitals could be of the greatest possible use as a factor in the war upon which we are entering, but to some of us the precise nature of the usefulness of the hospitals has not been quite clear.

One of these specific uses is now taking shape. Last month we published the fact that St. Luke's Hospital of New York had appropriated a sum of money to open a thirty-bed ward for the purpose of preparing prospective recruits for the army who were slightly defective physically in some particular, as, for instance, a hernia or hydrocele, or bad ingrowing toenails, or some other condition easily remedied and without which remedy the applicant would be rejected by the army.

The College of Physicians and Surgeons of Philadelphia is now organizing a movement for the same purpose. Dr. W. W. Keen is president of the movement, and Drs. John B. Deever and James M. Anders are vice-presidents. The plan is that of Dr. William Duffield Robinson, and the Germantown Hospital has been selected as the place in which the patching up of prospective recruits is to be performed.

A third hospital has also come in under this scheme. The following letter was written to Major John A. Hornsby, M. R. C., by Dr. Max Thorek, president of the board of directors of the American Hospital and Training School for Nurses, Chicago:

"As a result of our conversation last Tuesday, I am happy to inform you that our board of directors has decided to tender to the government the services of our staff of physicians and surgeons and the new American Hospital to its available capacity is a 'repair shop,' as it were, for men who are rejected from the service of the army, navy, or marine corps by reason of defects which may be remedied by a surgical operation or medical treatment. Many of these men can be made available as soldiers or sailors, as you well know, by some surgical procedure that will fit them for active service, when otherwise they would be compelled to remain at home. While it is not the desire of our staff to pauperize any candidate to the army and navy service, still we feel that by giving our services as outlined above to individuals who cannot afford to obtain such service, the number of available individuals could be, perhaps, materially enhanced.

"We also propose to establish and maintain a department in our hospital for the correction of injuries received on the field, and endeavor to reestablish functional usefulness in limbs where such aim can be reached by orthopedic, mechanical, and other means. We also aim to establish a school for the education of such individuals to make them, as far as possible, useful members of society and to enable them to earn a living in their changed physical conditions.

"We have consulted with some of our leading citizens with a view of organizing a citizens' committee—an organization that will assist us in carrying on this work.

"Will you not present this offer to the proper authorities at Washington, that we may be guided by any suggestions they may have to make as to the scope of such services or the manner and detail of the work to be performed?"

In accordance with this request, Major Hornsby laid the offer of the American Hospital before the War Department at Washington, and received the following reply from Col. W. V. Birmingham:

"The Surgeon General requests me to thank you, and through you the American Hospital of Chicago, for your kind offer in the matter of operating on prospective recruits of the U. S. Army for the relief of slight disqualifying physical defects, such as hernia, hydrocele, ingrowing nails, etc., which are remediable by a simple surgical operation, thereby saving to the service many who would otherwise be lost."

The American Hospital is now perfecting its arrangements to open a sufficient number of beds to do the largest possible amount of work largely in connection with the recruiting service in the central department with headquarters at Chicago.

It is expected that many other hospitals in different parts of the country will offer their facilities and the services of their staffs for this same sort of service.

THE BUYER FOR THE HOSPITAL

Some Further Thoughts on a Recent Editorial "The Superintendent and the Salesman"

BY M. L. REID, San Francisco, Cal.

Such an editorial as that recently published in THE MODERN HOSPITAL, under the caption of "The Superintendent and the Salesman" cannot fail to have the widest and most salutary effect, not only on the hospitals themselves, but on all business houses that are seeking a market in the hospitals.

"Goods well bought are half sold," runs an old adage. For the benefit of the modern hospital, this might well be changed to read "Careful purchasing is the best financing." A great deal is heard about the best methods of financing institutions—of ways and means to meet a too frequent deficiency. Often these two subjects would readily solve themselves were proper attention and care given to the spending of the money already raised. No institution can hope to meet with continued success unless serious attention is paid to expenses. One of the biggest items of expense is that for supplies of all kinds.

The difference between careful buying and careless buying may spell the difference between success and failure. In any modern merchandise establishment, the purchasing department is the most important of all. Compared to the salaries paid clerks and salesmen, those given the buyers mount to princely heights. In the face of this evidence of the importance of purchasing, a great many hospitals, whose yearly purchases amount to many thousands of dollars, are very prone to let their purchasing department take care of itself. In many cases the buying of supplies is left largely to the superintendent, who gives it serious thought only when there is nothing else for him to do. Only too often an institution so conducted has no system of checking of supplies on hand. In fact, it is often the case that the superintendent does not know of the need of some particular drug, dressing, or food until the hospital's supply is exhausted. Then purchases are made from the quickest available source, irrespective of price or quality. In many cases the nearest source of supply is several days distant. It is all perfectly well to say that no hospital, properly conducted, should find itself in this position, but every reader of this article knows only too well that such an irritating condition of affairs is not at all exaggerated.

In every institution, just as in every mercantile establishment, there should be one person whose duty it is to give proper attention to the buying. If the hospital superintendent is too busy with other duties, then some one else should be appointed and held accountable for this most important work. It should be the duty of such a person to investigate, learn, and know the standing and responsibility of the various firms with which he may do business, either by mail or through traveling salesmen. The next duty is to see that every order is placed intelligently and

that the goods received are up to the proper standard in quality.

Still more important, and directly in line with the purpose which placed the buyer in his position, is the fact that an interview should be accorded every salesman who calls, representing a reputable, established firm; that an effort should be made to familiarize himself with the catalogues received; that manufacturers' and dealers' advertisements should be given careful attention. These are the three greatest sources of information for any institution, and are worth while. The buyer who familiarizes himself with conditions and who keeps posted can easily save, even in smaller hospitals, much more than his salary. But the satisfaction which the institution will gain in getting standard goods and in having satisfactory dealings with supply houses is also a benefit that can be figured in dollars and cents.

A buyer, with other duties which require his time, should set aside certain hours each day in which to interview salesmen. Above all things such a buyer, to earn his salt, should realize immediately that it is as much, if not more, to his interest and the interest of the institution which employs him, to consult with salesmen for reputable houses as it is to the salesmen. At the same time a salesman should try, so far as possible, to suit his time to the convenience of the buyer, while the buyer should realize that the salesman's time is equally as valuable as his own. Buyers should keep in mind that a traveling salesman's time is not his own, but belongs to the firm which he represents, as well as to the customer. An hour lost here, through the whim of a buyer, may mean the missing of a train and an important engagement in another city, and consequently many hours lost in the end.

Buyers should also remember that their knowledge of the standing and reputation of the house the salesman represents, and the way that house does business, is going to pay dividends to themselves and to the hospital. It is a matter of business efficiency, as well as an act of courtesy, which is sure to win in dollars in the long run.

How often does the superintendent of a hospital tell a traveling salesman he needs nothing, only to find upon a half-hour's talk that he really needed several hundred dollars' worth of supplies and needed them immediately? Or, after the salesman has been refused an interview and has gone his way, the superintendent discovers himself "out" of and in actual need of supplies on which, had he stopped to listen to the salesman, he could possibly have saved 15 to 20 percent. The only thing that stood in the way of the superintendent making that saving was his belief that he was "too busy to talk to salesmen."

Many hospital supplies, such as surgical dressings and foodstuffs, are subject to market fluctuations. The salesman for any reputable supply house should be, and generally is, well posted with reference to market conditions. The buyer has everything to gain by granting an interview to such salesmen. For instance, a hospital may be in need of gauze; any of two or three grades might be purchased to advantage at that particular time, while the time would be inopportune for contracting for other grades. But how is the superintendent to know this fact unless by talking to the salesman? The salesman can just as easily keep the superintendent or buyer informed as to market conditions on foodstuffs and other supplies and whether or not it is advisable to place the order then, or wait for a lower market.

What many superintendents and buyers are not able to realize, or rather do not seem to realize, is that the reputable, established business firm is not a gambler, trying to sell at top prices, but is instead a cooperator, only too anxious to serve its customers' wants at the lowest possible prices. Reliable mercantile firms today figure their profits on a regular percentage basis, taking into consideration capital employed and efforts expended. Whether goods are sold at high or low prices does not, in any way, affect their percentage of profit.

It is of the utmost importance that hospital superintendents or buyers should know the standing in the business world of the firms with which they do business. The firm name or trade-mark of every established business firm is generally regarded as representing a certain standard of quality, price guarantee and method of doing business, and hospital superintendents should make it their business to know what standards such names and trademarks really stand for.

Reputable hospital supply houses generally are endeavoring, through the use of experienced salesmen, through the aid of improved equipment and skilled mechanics and engineers, to further the usefulness of the modern hospital, just as much as the medical and nursing forces are, and it is with these firms that superintendents and buyers should endeavor to cooperate more liberally.

When such cooperation is fully realized between institutions and the reputable business houses "shysters" will be forced out of business, and the old question of ways and means of raising additional funds with which to wipe out deficits in the treasuries of institutions will not occur so frequently.

THE RELATION OF THE NURSES' TRAINING TO THE GREAT WAR*

Impending Scarcity of Trained Nurses—Measure to Meet the Emergency—Volunteer Nurses' Aides and Home Nursing Associations

BY JOSEPH L. BAER, M. D., F. A. C. S., Chicago.

Speakers anywhere in the United States tonight cannot fail to comment on the tremendous importance of this day of national registration, so striking an event in our history, and our relations to the great war, and you young ladies are more closely allied to this significant war movement than most of you realize at present.

The general nursing situation in the United States today is undergoing radical changes and has many fundamental problems to meet. There are at present about 75,000 graduate nurses and 35,000 pupil nurses in training in the whole country. This body is being drawn upon from two directions. First and most important is the effect of the war demands.

The army figures require that for each million men there must be 10,000 doctors and 20,000 nurses; that is, for each hundred men, one doctor and two nurses must be available somewhere in field or hospital to take care of the sick or wounded in that hundred. The government takes only graduate trained nurses, who have received the degree of R. N.—in other words, the best nursing material available.

Many of you undoubtedly know about the base hospital units formed and being formed all over the country.[1] . . .

By next year a probable minimum of 1,500,000 men will be under arms, meaning a withdrawal of 30,000 trained nurses from civilian fields.

The second draft upon the available general nursing

*An address delivered before the 1917 graduating class of the Michael Reese Hospital Nurses' Training School on June 5, National Registration Day.

[1] Eleven Michael Reese nurses are enrolled in Base Unit 14 on the active list and the same number on the reserve list.

body is the ever-increasing tendency among trained nurses to specialize. They become school nurses, sanitary nurses, industrial nurses, district nurses, executives, etc., and are thereby withdrawn from the private nursing field.

To meet this impending scarcity among the trained nurses available for the civilian population, there are two main sources of supply. The first is a temporary device, but one which will have an immense task if the war lasts as long as the government preparations would indicate. I refer to the volunteer nurses' aides, as worked out by the National Red Cross. I do not mean those who have had the courses in home nursing, hygiene, bandaging, etc., but those volunteers who have been affiliated with the base hospital units and have had thirty hours' didactic and seventy-two hours' practical work given in those hospitals. A movement is already under way to offer these same courses, consisting of a minimum of thirty hours of theoretical teaching and one hundred and twenty hours of bedside work in every available hospital in the country, making each a Red Cross base hospital and placing the courses under the control of the Red Cross, thus giving these workers an official status after completion of their course. Then, when the army makes its drafts on the trained nursing body, these volunteer aides will be available to fill the gaps wherever needed in civil or eventually in military fields.

Germany, seven years before the great war, began this system of training and so had an immense army of practical nurses ready when the call came.

The second movement is a permanent step and consists in the formation of so-called home nursing associations. The movement was conceived primarily to afford adequate nursing care in the homes of the middle and poorer classes, for whom the rates for trained nurses are a real hardship—more so now than ever, since it has been found necessary to raise the rates. Such organizations are already in existence and doing excellent work in Detroit and Boston.

They are controlled by graduate nurses who give three to six months' courses to selected practical nurses and act as a registry, placing these nurses where they are best qualified to serve.

Now let us see how the Michael Reese Training School is meeting these problems of today. There are in the school from 15 to 25 probationers, 100 to 120 pupil nurses, about 15 affiliated pupil nurses and 7 to 8 post-graduate nurses taking special courses, all working under 24 paid heads, supervisors and assistants, besides from 40 to 60 graduate nurses, chiefly Michael Reese graduates, on special duty with private patients, an organization sufficiently well trained and elastic so that, if need arises, it can absorb a great many volunteer nurses' aides (limited to 10 at a time by Red Cross). The three-year course provides much more than the minimum number of hours of theoretical work necessary to meet the Illinois State Board requirements, and still gives the nurses adequate practical training, specializing being left to post-graduate courses.

You have heard enough to convince you that the problem of the training school is bigger and more difficult of solution today than ever before, and we are exceedingly fortunate in having at the head of our training school in the person of Miss Margaret MacKenzie, not merely a capable executive, but a real nurse, one of the best of the Michael Reese graduates, who will never lose sight of the chief function of the nurse, the care of the sick.

And now, young ladies, in congratulating you on behalf of the medical staff and myself, upon the completion of your training, may I express the hope that, in whatever fields your work may lie, you will always show the same good judgment that you showed in selecting the Michael Reese Hospital Training School and that you will always uphold the best traditions of your school.

WAR-TIME ECONOMIES

Flower Hospital Has Posted No-Waste Bulletin That Should Serve an Excellent Purpose

The Flower Hospital of New York, of which Mr. Oliver H. Bartine is superintendent, has posted all over the institution a no-waste bulletin of which a reduced facsimile is herewith presented, the original being 9 by 17 inches. It is a most excellent reminder to everybody of the new era that is upon us all, and the urgent necessity for everybody to conserve everything that is of use.

WAR TIME ECONOMIES

SUPPLIES OF ALL KINDS ARE COSTLY—DO NOT WASTE.

TIME AND SERVICE COSTS MONEY.

1 Cordial and loyal co-operation WITH and WITHIN all departments is absolutely essential

2 Physicians and Surgeons, both visiting, attending and house, as well as nurses and employees, are requested to bring about the economic use of drugs, dressings, appliances and surgical supplies, as well as all food supplies

3 DO NOT use an appliance or a surgical instrument, except for the purpose it is intended

4 Save the worn out article or the broken, in order to obtain a new one on requisition

5 Extravagance of the employees is frequently criticized within and outside the Hospital Help us to avoid this criticism

6 Do not light an electric lamp or gas when not necessary To do otherwise is wasting money If you find an unnecessary light burning, turn it off All lights not actually necessary must be extinguished by 9 P M

7 Do not use the printed blanks of the Hospital for any other purpose than they are designed Blank forms cost money

8 Old rubber is valuable Do not throw any away Keep rubber in a cool place Do not allow any form of grease on rubber as it causes it to rot

9 Do not take the elevator to go up or down one or two flights of stairs

10 Kindly co-operate in the economical use of linen

11 China is very expensive Observe the utmost caution in handling

12 Any suggestions towards the economical use of supplies are solicited

13 Extravagance in the use of food at the present time is CRIMINAL Order only what is absolutely needed and return to the kitchen all unserved food

14 Before making requisitions, assure yourself that it is ABSOLUTELY necessary

15 Each ward or department must keep a strict account of all supplies

16 Supplies are NOT to be taken from the Hospital

17 Doctors, nurses and attendants are directed to use the utmost economy in the use of gauze, cotton and bandages etc Do not use two pieces where one will serve the purpose

18 Loss of time is wasteful and extravagant For instance Late on duty often causes confusion and dissatisfaction Late at meals not only means delay in going on duty but extra work in the dietary service and in other departments

19 Handle all Hospital property and equipment with care Our repair bill is already enormous

20 Request for repairs should be made by the head of the department on blanks provided for that purpose and sent to the Superintendent

21 Heads of departments will please see that these orders are rigidly carried out

22 If we all unite in small economies it will make for a large economy for the Hospital as a whole

23 We have not had to do this before is frequently heard It should have been then Now it is imperative Why question?

OLIVER H. BARTINE, *Superintendent.*

Generally speaking, hospital workers are not maliciously wasteful, but also, generally speaking, most hospital workers, including doctors and nurses, are extremely careless. Sometimes the doctors and nurses attempt to

justify extravagance in the use of supplies on the score that "human life is precious," and that a life might be jeopardized by the waste of a moment in an attempt to save an infinitely small piece of gauze or cotton. It is not a good argument, because we all waste an immense amount of time every day doing trivial things or nothing at all, and we could salvage a little of these wasted moments if only the necessity were called to our attention often enough at the auspicious moment. Mr. Bartine's bulletin would serve this purpose.

A "HUT" HOSPITAL

A Hut May Be Preferable to a Palace for Hospital Uses—Useless Luxury an Inconvenience

It seems that there has been more or less criticism by zealous British patriots because the war office has not commandeered this or that luxuriously appointed club for hospital purposes. Lance-Corporal Ward Muir, R. A. M. C. T., Third London General Hospital, writing in *The Hospital,* London, June 9, demonstrates the falacy of the idea that for a hospital "any pleasingly situated edifice will do, provided beds and nurses are shoveled into it in sufficient quantities." He compares the actual comfort and working efficiency of wards domiciled in an orphans' home built "in the Scottish baronial style of architecture beloved by mid-Victorian philanthropists" with those sheltered by huts:

"The best part of our hospital—*the* hospital to most of us—came into being when the commandeered Scottish baronial orphans' asylum was found to be too small. Then were built 'the huts.' The word 'hut' suggests something casual, of the camping-out order; a shed knocked together with tin-tacks, doubtfully weatherproof, and probably scamped by profiteering contractors. . . . The finely austere and efficient ranks of hut-wards which constitute the main part of the Third London General Hospital are the very antithesis of that picture. They may look flimsy. They were certainly put up at a remarkable pace. . . . But, in the long run, the ideal hospital remained—a hospital with which the So-and-So Club in Pall Mall, for all its luxuriousness, could never hope to compare. . . .

"Looked at from outside, a hut-ward is—to the esthetic eye—a hideous structure. Knowing what it stands for, the science, the tenderness, and the fundamental civilization which it represents, we may descry, behind its stark geometrical outlines, a real nobility and beauty. Entering a typical hut-ward you behold thirty beds, fifteen on each side of the room. Between each pair of beds is a locker in which the patient stows his belongings. In the central aisle of the room are the sister's writing-table, certain other tables, chairs, and two coke stoves for heating purposes in winter. The floor is carpetless, and maintained in a meticulous state of high gloss by means of daily polishings. At a height of a few feet from the floor, the asbestos-lined walls cease, and become windows. There is no gap in the continuous line of windows all down each side of the ward—a special type of window which, even when open, declines to allow rain to enter. In consequence of these windows the ward is not only well lit, but also airy and odorless. When all the windows are open (which is the case throughout the entire summer and generally the case in winter also), the patient has the advantage of indoor comfort plus an outdoor atmosphere. At the end of the ward a covered veranda is spacious enough to take an extra couple of beds for those requiring completely open-air treatment.

"The ward proper has certain additions; a kitchen with gas stove and geyser, a sink room with geyser and cleansing apparatus of special pattern, a bath room with geyser, lavatories, a small room for the isolation of a patient on the danger list, a linen room, and cupboards. All these are packed neatly under that one rectangular corrugated roof, which looked so ugly and so unpromising from outside.

"Do not pity the wounded soldier because he is quartered in a hut. The word sounds unattractive. But if it is the right kind of hut, he is in the soundest and most sanitary type of temporary hospital that the mind of man has yet devised. . . ."

THE RED CROSS HOME NURSING COURSES

Admirable Instruction Organized for the Women of the Country Before Outbreak of War—Popular Interest Aroused

For about a year before the United States was drawn into the war, the American Red Cross had been preparing to offer the women of the country instruction in home nursing, dietetics, etc. The intention was not to furnish a short cut to the nursing profession, or even to prepare nurses' aids, but to make women more efficient in the care of their own families within their own homes. The entry of this country into the great war has greatly stimulated popular interest in the courses; it has also created some confusion in the popular mind as to their purpose. It has been assumed sometimes that the instruction thus given qualifies for some kind of professional service, and the Red Cross has found it necessary to emphasize that, so far from preparing Red Cross nurses, the courses do not even attempt to prepare nurses' aids. The purpose is simply to teach the women of the country those things which all women should know about hygiene, home care of the sick, dietetics, first aid, etc. Four courses are offered, as follows:

A. Elementary hygiene and home care of the sick (fifteen lessons).

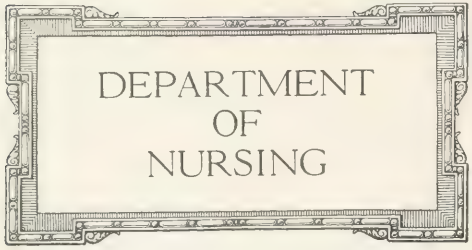
B. Dietetics (fifteen lessons).

C. Surgical dressings (eight lessons).

D. First aid.

The course in elementary hygiene and home care of the sick must be given by a Red Cross nurse; that in dietetics, by a dietitian officially appointed by the Red Cross; that in first aid, by a physician approved by the Red Cross. The cost of instruction is in each case borne by the class, which may not contain more than ten or more than twenty members. Pupils who attend 80 percent of the classes are allowed to take an examination given by a certified examiner, and those who pass with a grade of 75 percent or higher receive a certificate from the American Red Cross. All courses are open to women over 16 years of age. The teaching centers which have been organized over the country have been enthusiastically attended. That organized in Chicago under the auspices of the Chicago Chapter of the Red Cross, under the directorship of Miss Ursula C. Noyes, for instance, has already had 7,000 pupils in one or more courses.

While the successful completion of any or all of these courses does not qualify the pupil for service as a nurses' aid, Course A (elementary hygiene and home care of the sick) is required of all candidates who wish to take training qualifying them to act as volunteer nurses' aids in base hospital units; preference is given to women who have had also the other courses of instruction offered by the Red Cross Bureau of Nursing Service. Accepted candidates bind themselves to two years' service, if called on, for which they must prepare themselves by taking seventy-two hours' training in a hospital. Each base hospital unit may have twenty-five volunteer aids on active service and twenty-five in reserve. It should be added, however, that no volunteer aids have yet been called into service. The Red Cross does not approve of the placing in military service of women who have received only this elementary training until it becomes absolutely necessary.



Conducted by MISS ANNIE W. GOODRICH.
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

The 1917 Annual Meeting of the National Organization for Public Health Nursing

BY ELIZABETH G. FOX, Superintendent of the Instructive Visiting Nurse Society, Washington, D. C.

If crowded round tables, eager, rapid-fire questions, attention so fixed that the closing hour goes unheeded, and urgent requests for more and more round tables—if this diligent seeking after knowledge and untiring enthusiasm are the "growing pains" of healthy progress, then the National Organization for Public Health Nursing surely displayed the robust vigor of youth in its fifth annual convention in session jointly with the American Nurses' Association and the National League of Nursing Education the last of April.

Outstanding among the many subjects under discussion were health insurance, health centers, health conditions in prisons, social hygiene, and the extension of prenatal and postnatal nursing.

The significance of health insurance and the necessity for it were presented in a large joint session in the evening of April 27 of the three national organizations by Dr. Charles Hatfield, Mr. Miles Dawson, Dr. I. T. Rubinow, and Miss Pauline Newman. The three national bodies of nurses approve of the principle of health insurance and endorse and support the inclusion of nursing service in the provisions of the model bill. The words "adequate nursing care," appearing in every bill so far drafted, give an opportunity to provide nursing service to a far larger proportion of the population than has ever before received the benefit of such service. The very newness and vastness of the possibilities with their many ramifications brought the realization that there should be no hasty, ill-conceived interpretation or execution of this new function of nursing. For this reason no action was taken. The committee representing the three organizations was instructed to continue its study and to present to the convention a year hence its report, which would include a carefully worked-out plan, defining the words "adequate nursing care," and describing the precise methods of putting this provision of the bill into practice.

The wide reach and inclusiveness of a thoroughgoing plan of community health preservation came out in the description of health centers. According to Dr. William C. White, of the University of Pittsburgh, any complete plan would evaluate and use in due place and proportion the household group, mother, wife, sister, and untrained practical worker, the graduate nurse in the home, and the consultant and specialist nurse. Every factor which enters into the problem should be played up and used to the limit of its ability. The responsibility of the municipal government to take over each branch of public health nursing, child hygiene, tuberculosis, contagious and venereal disease, school, prenatal, bedside nursing, mental hygiene and others, and to weld all these into an effective unit was warmly advocated by Dr. Robert H. Bishop, of Cleveland.

Mr. Thomas Mott Osborne had the close attention and interest of the nurses at one of the evening sessions, while he told his story of the conditions in American prisons, dwelling especially on the menace to the public of the disregard of disease among the prisoners. He said that the men got their revenge on society by carrying back to society disease, both moral and physical, acquired in prison.

The statement, made by Dr. Grace L. Meigs, of the Federal Children's Bureau, that outside of hospitals the death rate from childbirth has shown practically no decrease in twenty years, and that in 1913 childbirth caused more deaths among women 15 to 44 years old than any disease except tuberculosis, intensified the interest that has been growing recently in the problem of securing better medical and nursing care for women prior to, during, and after confinement. The needs of remote rural homes were clearly brought out. According to Dr. Meigs, a county unit with doctor, visiting nurses, and a central prenatal and infant clinic, perhaps at the county seat, might be one way of reaching the difficulty. That this situation must be taken up and dealt with much more vigorously than hitherto was the unanimous opinion.

The Academy of Music was packed for the evening session of the Red Cross, which is fully described in the report of the American Nurses' Association. Of special interest to public health nurses was the urgent plea of Dr. Warren H. Wilson for two hundred Red Cross nurses immediately for rural work. Dr. Wilson presented in fascinating, glowing words the great need for public health nurses in the southern mountains. He struck a note that was already hammering loudly in many minds. Many of the public health nurses were torn between their desire to serve the armies of their country in the Red Cross ranks and to serve the civil population by remaining at their public health nursing at home. The urgency of both demands made it and will continue to make it a very difficult decision for each individual nurse to make.

A ringing resolution was passed and sent to President Wilson, expressing sympathy for and confidence in him, and closing with these words:

"Resolved, That we pledge our best service to the Nation wherever called upon to render it, either in home or foreign field, in the daily routine of civil or military hospital or in the equally great effort to conserve, protect and strengthen the health and endurance of the citizen population, the men, women and children at home in our land."

A goodly number of lay women directors of various public health nursing organizations attended the convention and held many round tables for the discussion of their several administrative problems. The good to be gained from this meeting of administrators, executives, and staff nurses was forcibly demonstrated.

Some four hundred nurses and lay women were registered by the National Organization for Public Health Nursing. The nurses represented every branch of public health nursing, industrial and mental hygiene, medical social service, and prenatal care, as well as the more common branches of visiting, school, and tuberculosis nursing, and others. Miss Mary Beard, superintendent of the Instructive District Nursing Association of Boston, retains the presidency of the National Organization another year.

The Demand Which Mental Hygiene Makes Upon the Graduate Nurse*

BY JESSIE TAFT, Ph. D., Social Service Director of the Committee on Mental Hygiene of the State Charities Aid Association, New York City.

The mental hygiene movement thus far has spent its energy in two general directions: first, the education of the public to a less prejudiced attitude toward mental disease through the publicity work of mental hygiene societies; second, the education of the hospital for the insane to an appreciation of the importance of prevention and to the part played by social service and the readily accessible mental clinic. For this work mental hygiene needs the graduate nurse. It cannot go on indefinitely without her, and yet nurses as a group have not, up to this time, taken the part they are equipped to take in this movement. They have been so occupied and absorbed in the overwhelming problems of the field of physical hygiene that they have hardly become aware of the responsibility for mental health, which rests upon them with equal obligation. Many individual nurses, it is true, have played an important part in the mental hygiene program, but nursing as a profession has not yet perceived the bearing of this new field upon the public health in general. Health is not really being conserved or disease prevented as long as the entire field of mental life with all its possibilities for disaster is being ignored.

My purpose is to take up each of the two phases of the mental hygiene movement just mentioned, point out if I can the part which the nurse should be taking, and present what seems to me the logical next step in mental hygiene and its even closer connection with the work of the public health nurse.

The publicity phase of the mental hygiene movement has for its chief object the raising of the level of general intelligence on the subject of insanity and hospitals for the insane. It is trying to bring about on the part of the general public a more rational attitude toward diseases of the mind, such as already prevails with regard to diseases of the body except among the most ignorant.

Regarding mental disease there is a blank wall of ignorance and prejudice to be overcome which is comparable to nothing in the field of physical hygiene, except perhaps venereal disease. Even the great mass of ordinarily intelligent people recoil from the very idea of insanity as if it were a crime. They tend to postpone any kind of medical treatment as long as possible; they shun the state hospital for the insane as if it were a prison and will take any kind of quack treatment at outrageous prices in something labeled sanatorium rather than accept the best expert attention in an institution which frankly treats mental disorders. The ordinary man has not, as a matter of fact, advanced very far beyond the period of superstition regarding mental diseases. He is barely removed from the concept of insanity as demoniacal possession. You would have to leave the circle of the average intelligent citizen to find a person who still treats physical illness as essentially mysterious, to be cured by something having no relationship to it, such as magic or a charm. But on the mental side, the average citizen is as much a prey to superstition as if he had not been born into a scientific age.

Not many weeks ago I talked with a college man, a teacher of mathematics, who had allowed his wife, ill with one of the most serious mental disorders, to experiment with various cults for mental healing. Then he had paid out something like $100 a week for purely custodial care in a sanatorium. He shrank from the notion of a hospital for the insane as if it were a pesthouse. His wife, if she recovered, would never forgive him for putting her with insane patients; it would rankle in her mind always.

It is this kind of blind fear and prejudice even among the otherwise intelligent that mental hygiene has to break down before mental health and disease can be treated rationally like physical health and disease. The mental specialists are eager to give necessary enlightenment, but they are powerless to reach more than the comparatively few with whom they come into direct contact. Without the social worker they have no means of getting at the general public effectively. The social worker is one great medium through which the knowledge of the psychiatrist can work its way out into human life. And of all social workers the public health nurse is the most important, because, along with her social viewpoint and her general knowledge of the importance of the social situation in her cases, she has the medical background and the scientific attitude toward disease which needs only to be extended to the field of mental diseases—and, above all, because of the great influence which she has over the attitude of the people in her district.

The position of the nurse in public confidence is certainly unique. She carries with her an authority which no other worker possesses. She is more responsible than any other class of individuals except the physicians for the place which physical hygiene now holds in our civilization. Once let the public health nurse accept the mental health of the community as part of her responsibility and equip herself to deal with the mental situation wherever she meets it, the wall of ignorance and prejudice which the specialist throws himself against in vain will soon begin to crumble.

The district nurse has it in her power to influence the family in which there is a case of definite insanity to send the patient to a hospital where he will receive proper care. She is in a position to see many cases of mental disease in their beginning stages and is the logical person to point out to the family the true nature of the trouble and urge the need of early treatment. She is the one who can spread the knowledge of the mental diseases due to syphilis and alcohol into the farthest nooks and corners of an ignorant foreign neighborhood. If every district's visiting nurse were alert to mental symptoms as she is to physical symptoms, she would be able not only to do an immense amount of prevention, but also actually to lift appreciably the weight of ignorance in her particular neighborhood. Is there any good reason why she should not do just this?

With that phase of the mental hygiene movement which has to do with the public hospitals for the insane, the experience of New York State offers an excellent illustration. The work in New York State began eleven years ago when the State Charities Aid Association formed what was known as an after-care committee. Their idea was to show the hospitals the desirability of paroling patients and the possibility of doing it frequently if some worker became responsible for supervision. This idea grew with the growth of social service and the increasing emphasis of psychiatrists on the need for prevention and early treatment of mental diseases, until finally, six years ago, the present Mental Hygiene Committee of the State Charities Aid Association was born, with the ultimate purpose of showing the hospitals for the insane that their real field is outside the hospital and their greatest work prevention. In other words, they set about to socialize the state hospital. This involved a demonstration mental clinic to show what a psychiatrist and a social service worker,

*By courtesy of the American Journal of Nursing.

working together, could do practically to keep people out of hospitals for the insane. The demonstration was so successful and so convincing that today, after six years of work, this committee has the satisfaction of seeing its purpose well on the way to fulfillment.

Two years ago there were not more than half a dozen mental clinics maintained by state hospitals outside their own walls and only an occasional hospital which had a nurse appointed to visit paroled patients. Today practically every hospital has gone out into its district and established one or two mental clinics where anyone may come to consult a specialist about his mental troubles as easily and inconspicuously as he would consult an ordinary physician. Today not a single hospital is without a social service worker, whose work in the clinic is involving as much general preventive work as it does work with the paroled patients. Twenty-three clinics of this character are now in operation under a regular schedule, and so great was the existing need that, once people understood about their purpose, many clinics were swamped at their opening sessions.

Of course, the state hospital social service nurse is overworked and she is often not sufficiently equipped for the job; but at any rate she is there, and in her the value of social service with the mentally ill has been officially recognized. However untrained and unfitted she may be, the fact remains that she is opening up a new field of opportunity to the modern graduate nurse. Salaries are already being raised to $1,000 and $1,200 with maintenance. The hospitals are already asking for more social workers. The social service nurse for mental case work was formally welcomed at the annual meeting of state hospital superintendents last winter, and already the State Hospital Commission is considering the standard of requirement for such work and the possibility of putting the position under civil service.

We probably cannot estimate now the immense importance of this change of policy on the part of the state hospitals, of this determination to step beyond the hospital walls and become a vital part of the community life in their districts. Its ultimate development no one can anticipate, but one thing is clear—that the success of this movement depends to a large extent on the tact, intelligence, and social training of the nurse who, in the last analysis, must be the one to make the connection between the clinic and the community. If she is equal to the greatness of her opportunity there will be no limit to the work which she can do in making the hospital for the insane, once chiefly custodial, an effective instrument in the prevention of mental disease and in the positive increase of mental welfare and efficiency within its district.

Will the nursing profession, through the influence of its organized power, help to put into state hospital social service work a type of nurse who is equal to the opportunity?

These two aspects of the mental hygiene movement, the education of the general public and the preventive work of the state hospitals through the mental clinic, valuable and necessary as they are, are nevertheless, as I believe, only the forerunners of the heart of the movement. They are attacking from the outside, in an external fashion, the end-results of unhygienic mental living as they manifest themselves in adult life. Mental hygiene, to become an organic part of our social organization, will have to make another approach, an approach which will attempt to modify beginnings rather than endings. Psychiatrists tell us that the morbid tendencies and unhealthy mental attitudes which lead to badly adjusted lives, even when they do not result in some functional mental disease, must be reached, if we are to have genuine prevention of mental disorders, when they are still in the process of being formed. If this is true, it is the child, not the adult, who offers the most fruitful field for mental hygiene, and it is only through the public school system that we shall be able to get at the child effectively.

The school with its hold on child life is the nucleus—the growing point of our civilization—the center through which most of our social problems are to be attacked. Once let mental hygiene enter into the school system in the thoroughgoing way in which physical hygiene has already entered, and its connection with the life of society becomes vital.

This is not such a utopian idea as one might think at first, nor is it without precedent. We have grown so accustomed to seeing the schools take the responsibility for the physical health of children that we forget it has not always been so. We forget what a revolutionary idea it once was to expect schools to look after eyes, ears, noses, and throats, as well as reading, writing, and arithmetic. We now accept placidly as a matter of course the obligation of the school to equip its children with as healthy bodies as possible, but we are startled and skeptical when the perfectly logical next step is taken—requiring the school to be as interested in making minds healthy as it has been in making bodies healthy. It would be hard to recall a time when a sore throat in the school room had significance chiefly from its effect on the attendance; when it was not recognized as a possible symptom of certain unhygienic conditions demanding attention both for the sake of the child and for the sake of the entire school, rather than as a bare fact, likely to spoil the attendance record of the child or the class for that month.

Yet that is just the condition in which certain mental phenomena stand today in the school room. Persistent, unexplained tardiness or truancy, unusual obstinacy, extreme unsociability or shyness, unaccountable failure in class work on the part of the bright child—all of these are recognized, it is true, but they are recognized for the most part as bare facts affecting the discipline, attendance or scholarship of the class, not as symptoms of a condition in the child's inner life which demands attention. This ignoring of the mental life of the child, except that attenuated, intellectual phase of it which is involved in the learning and reciting of lessons, and the failure to see any meaning in unusual reactions to school life except their disturbing effect on school routine—this blindness is the most discouraging feature of the school situation at the present moment, particularly in our large cities.

That it is possible for a child to commit suicide because it fails of promotion, as occurred a year ago in New York City, may be an indication of the neurotic character of that child, but it is equally an indication of the utter failure of the school to understand the kind of child it was dealing with or to attempt to give that child a more reasonable estimate of the value of promotions. The school evidently had not had the slightest comprehension of what failure in school work meant in that child's life—a meaning dependent on an unusual sensitiveness to social approval—perhaps to undue pressure at home. But that does not alter the fact that the school failed utterly in helping that child to solve its most vital problems because it had never regarded the guidance of the instinctive and emotional development of children as part of its duty.

I recall another child who showed a peculiar negative reaction to many commands. Frequently when told to sit down she would persist in standing. She had been

known to stand for half an hour rather than obey. This conduct was considered purely a matter for discipline. The child was naughty and obstinate. The problem was how to force her to behave. The teacher was quite aware that she had an unusually difficult child and would have been glad of some assistance, but neither she nor the school as a whole had ever learned to approach such a condition from the mental side. They did not see the child's obstinacy as a symptom, and made no effort to find out what meaning it had for the child—what factors in her life were producing such an outward result and how they could be modified.

Conduct as disturbing as marked stubbornness, truancy, violent outbursts of temper, inability to give attention in the school room, and the like is sure to come to the attention of the teacher even when it is not recognized as a symptom of an underlying unhealthy mental condition. But other more subtle and unobtrusive manifestations usually escape observation entirely, and no attempt whatever is made to deal with them on any plane. Children who suffer from an intense self-consciousness and shyness, who are fearful and apprehensive, who are quite unsocial and do not mix with other children, who show unusual depression, who are dreamy and unpractical, or who are apathetic and passive, with little active interest in anything, are not recognized as problems because they give little or no trouble. They are frequently excellent in school work and are models of good behavior. They are, nevertheless, quite as badly adjusted as the more spectacular group and in need of a training which will get at the root of their difficulties and help them to overcome their unhealthy tendencies.

Two objections to the adding of such a tremendous responsibility to the already overworked school system will come at once to mind. You can never be sure that any given child was destined to become insane, and, after all, only a comparatively small proportion of children in each school are likely to develop a mental disease. The homes and outside agencies and physicians ought to assume care of this number.

The plea for mental hygiene in the public schools is based on something broader than what is implied in these two objections. To reject it on the ground that it is too subtle and too exclusive would be like rejecting physical hygiene because it includes specific complicated diseases affecting comparatively few children. Mental hygiene, after all, includes much more than insanity. If you could not be sure that a single child in a given school would ever develop a mental disease, there would nevertheless be the obligation to give each child as healthy a mind as possible. Insanity in its acute form is only one result of an unhealthy mental development. It is the extreme limit, and below that limit there are existing in thousands of individuals all degrees of mental disturbance which may never reach the point of being recognized either as mental or as disease. Yet these individuals are doomed to suffer through life—are forced to lead a crippled existence and are the very ones who would have benefited most by assistance in their school days. There is no one of us so well balanced as not to have been benefited by an educational system which considered mental hygiene a part of its duty.

This next step in mental hygiene, which we must take if prevention of mental disease is going to mean anything, cannot be taken without the cooperation of the school nurse. The school nurse and the visiting teacher, who is often a nurse as well, are the ones who will have to pave the way for mental hygiene in the school. It is they who must make the connection between the school and the mental clinic. It is they who must be alert to see, in the difficult child referred to them, the mental factors as well as the physical conditions which are at the bottom of his maladjustment. We may succeed in supplying mental clinics to be used by the school, but of what use will that be unless mental difficulties are recognized as such and the child brought to the physician? The mental clinic must depend largely on the school nurse and the visiting teacher for its material. If they are blind to mental symptoms the clinic will fail.

You nurses who have at heart the physical well-being of the world—you who are the guardians of the bodily health of the children—it is for you to realize that the health problem is still unsolved as long as mental health remains unprotected. You who have already so many burdens upon your capable shoulders will have to take on one more responsibility. We are looking to you as the most effective instrument we have to help make mental hygiene a reality in the school and safeguard the children against mental as well as physical disaster.

LETTERS TO THE EDITOR

For Better Laundry Work

To the Editor of THE MODERN HOSPITAL:

Some time ago it came to my knowledge that the Department of Household Arts Education of Teachers College, Columbia University, had a woman capable of giving expert advice along lines of laundry efficiency, who could be obtained for a month's service at a reasonable figure. She was employed at Lakeside Hospital for one month. In this time she won the cooperation of the laundry employees and put many changes into effect. She also left a full report of her observations with recommendations in detail. There has been a decided improvement in the color of the linen and the quality of work done. The number of men employed has not been changed, but the number of women has been decreased from eighteen to ten. There is no longer trouble about the delivery of the linen. It is always ready. It is my opinion that the assistance to hospital superintendents who cannot be expected to keep up with the recent rapid development in laundry work obtained by this means is worth far more to the institution than the cost.

This woman was apparently familiar with laundry machinery and proved of real assistance in the selection of machinery adapted to the peculiar needs of institutions. Lakeside has received so much benefit from this service that I wish to recommend it to other hospital superintendents for consideration, especially to those who do not believe that there is need for it in their institutions. It was my opinion, based on casual observation, that the Lakeside laundry, before these modernizing changes were made, compared satisfactorily with the laundries of other institutions. The necessity of replacing some worn-out equipment led to the special consideration of the laundry, which resulted in attempts to learn how real laundry people would run a hospital laundry and what kind of machinery they would have to do the work.

If you wish you may publish this letter.

A. R. WARNER,
Superintendent Lakeside Hospital, Cleveland, Ohio.

The daily habit of life should be based on moderation.—Kansas State Board of Health.

BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION

Monthly Bulletin issued from the Executive Offices
Medical Arts Building, Philadelphia, Pa
WILLIAM H. WALSH, M. D., Secretary.

The Cleveland Meeting of the American Hospital Association

We are publishing this month the tentative program of the Cleveland meeting of the American Hospital Association, which takes place September 11-14. Arrangements have been made for a larger meeting than has ever been held before. Because of the necessity to devote most of the time at the Cleveland meeting to discussions as to what the hospitals may and shall do under the acute conditions of the war, the program as published is announced as tentative, the purpose being to shift the items of the program so that as much time as possible and needful may be devoted to the war.

High officers of the government will be in attendance; there will be a splendid commercial exhibit, and, while the recreational or social part of the program may have to be largely dispensed with because of the urgency of the business of the meeting, it is beyond question that this is to be the most important—indeed, the epochal—meeting of our association.

The trustees have sent out a letter to every hospital in the country, urging the trustees of the hospitals to pay the expenses of a representative to come to the meeting. In an editorial in this issue the reasons why every hospital must be represented at the Cleveland meeting are stated.

Official Program of the Cleveland Meeting

TUESDAY, SEPTEMBER 11

MORNING

9:00: Invocation.
9:10: Address of welcome.
9:20: President's address—Dr. Robert J. Wilson, New York.
9:50: Response—Dr. J. W. Fowler, Louisville, Ky.
10:00: Report of secretary—Dr. William H. Walsh, Philadelphia.
10:30: Statement of treasurer—Mr. Asa S. Bacon, Chicago.
10:50: Report of board of trustees.
11:10: Announcements.
11:30: Adjournment.
11:40: Inspection of commercial and noncommercial exhibits.

AFTERNOON

2:00: Organization and Direction of After-Care Committee for Poliomyelitis—Dr. Donald E. Baxter, New York City.
2:20: Discussion.
2:30: Report of Committee on Out-Patient Work—Mr. Michael M. Davis, Boston.
3:00: Discussion.
3:10: The Venereal Disease Problem and the Hospital—Dr. H. L. F. Locke, Hartford, Conn.
3:30: Discussion.
3:50: Publicity as a Means of Education and Support—Dr. Frederick D. Greene, New York City.
4:10: Discussion.
4:30: Adjournment.

Business Meeting

4:30: Consideration of secretary's report.
4:50: Consideration of trustees' report.
5:10: Report of Membership Committee.
5:20: Report of Publication Committee.
5:30: Other business.
5:50: Appointment of Committee on Time and Place.
6:00: Adjournment.

WEDNESDAY, SEPTEMBER 12

MORNING

9:00: Report of Committee on Health Insurance—Dr. S. S. Goldwater, New York City.
9:20: Discussion—Opened by Mr. G. W. Olson, Minneapolis, Minn.
9:40: The Workmen's Compensation Law and Its Relation to Hospitals—Dr. Thomas Howell, New York City.
10:00: Discussion.
10:20: Hospitalism, Causes and Treatment—Mr. Pliny O. Clark, Wheeling, W. Va.
10:40: Discussion.
10:50: The Reorganization of the Civilian Hospital on a War Basis—Major Winford H. Smith, M. R. C., Baltimore.
11:10: Discussion—Opened by Major John A. Hornsby, M. R. C., Chicago.
11:30: Role of the Civilian Hospital Organization in Time of War—Colonel Jefferson R. Kean, U. S. A., Director American Red Cross.
12:00: Adjournment.

AFTERNOON

2:00: Report of Conference Committee on Standardization of Hospitals—Dr. W. H. Smith, Baltimore.
2:20: Discussion—Opened by Dr. J. A. Hornsby, Chicago.
2:40: Annual reports—Dr. T. M. McEachern, Vancouver, B. C.
3:00: Discussion.
3:20: Superintendents' Responsibility for Correct Dietary—Miss F. A. Blanchfield, Bellevue, Pa.
3:40: Discussion.
4:00: Practical Hospital Economics—Dr. Walter Morritt, Colorado Springs.
4:20: Discussion.
4:30: Adjournment.

Business Meeting

4:30: Report of Committee on Constitution and By-Laws—Richard P. Borden, chairman, Fall River, Mass.
5:10: Report of treasurer.
5:30: Report of Auditing Committee.
6:00: Adjournment.

EVENING

8:00: Report of Committee on Accounting—Dr. A. R. Warner, Cleveland, O.
8:20: Discussion—Opened by Mr. Cornelius S. Loder.
8:40: The Annual Budget and Its Supporting Statement—Dr. A. C. Bachmeyer, Cincinnati, O.
9:00: Discussion—Opened by Mr. Howell Wright, Cleveland, O.
9:20: Equalization of Departments in Accounting—F. E. Chapman, Cleveland, O.
9:40: Discussion.
10:00: Adjournment.

THURSDAY, SEPTEMBER 13

MORNING

Large Hospital Section

9:00: Oil as Fuel—Dr. John M. Peters, Providence, R. I.
9:20: Discussion—Opened by Mr. Oliver H. Bartine, New York City.
9:40: The Hospital, a Teaching Institution—Dr. H. G. Goodwin, Albany, N. Y.
10:00: Discussion—Opened by Dr. C. R. Holmes, Cincinnati, O.
10:20: The Relation of the Superintendent to Research Work—Dr. H. O. Collins, Minneapolis, Minn.
10:40: Discussion—Opened by Dr. J. F. Baldwin, Columbus, O.
11:00: Municipal Training Schools—Dr. Cleveland H. Shutt, St. Louis.
11:20: Discussion—Opened by Dr. A. B. Ancker, St. Paul, Minn.
11:40: The Preservation of the Health of the Civilian Population in Time of War; What the Civilian Hospital May Do to Aid the Government—Surgeon-General Rupert Blue, U. S. P. H. S.
12:00: Adjournment.

Small Hospital Section

9:00: The Relation of the Superintendent to Governing Board and Obligation as Admitting Officer—Miss Alice C. Cleland, Northampton, Mass.
9:20: Discussion.
9:30: The Obligation of the Community to Support Adequate Hospital Facilities—Dr. W. T. Graham, Iowa City, Ia.
9:50: Discussion.

10:00: Clinical Laboratory for a Small Hospital Mr. Neale L. Parrish, East Liverpool, O.
10:20: Discussion.
10:30: Visiting and Visitors—Mr. Joseph Geffen, Philadelphia.
10:50: Discussion.
11:00: Controlling Basis for the Economical Purchase of Supplies—Dr. H. J. Moss, Baltimore.
11:20: Discussion.
11:30: Qualities that Make a Good Superintendent of Nurses.
11:50: Discussion—Opened by Miss Ida M. Barnes, Grace Hospital, Detroit, Mich.
12:00: Adjournment.

AFTERNOON

Large Hospital Section—Round Table, Conducted by Dr. Lewis S. Test, Philadelphia.

3:00 to 4:30: Five questions to be propounded, each person will be allowed five minutes.

Small Hospital Section—Question Box.

3:00 to 4:30.

Business Meeting

4:30: Unfinished business.
4:50: Report of Committee on Time and Place.
5:20: Report of Nominating Committee—Dr. Roswell P. Bush, Buffalo, N. Y.
6:00: Adjournment.

FRIDAY, SEPTEMBER 14

MORNING

9:00: The Mixed, Permanent Staff Hospital—Dr. H. L. Foss, Danville, Pa.
9:20: Report of Committee on Legislation—Dr. George O'Hara, New York City.
9:50: Discussion.
10:00: Report of Committee on Preparedness—Dr. F. S. Watson, Boston.
10:20: Discussion.
10:30: Report of Delegate to American Medical Association—Dr. John A. Hornsby, Chicago.
10:40: Report of Delegate to American Public Health Association—Mr. Michael M. Davis, Boston.
10:50: Report of Committee on Necrology—Dr. Henry H. Belfield, Chicago.
11:00: Tuberculosis—Dr. E. S. McSweeney, New York City.
12:00: Adjournment.

AFTERNOON

2:00: Address—Governor Cox, of Ohio.
2:30: Installation of newly elected officers.
3:00: Announcements by trustees.
3:30: Address of thanks to the city of Cleveland.
4:00: Adjournment.

Official Bulletin for July

For the reason that some of the government officials who will present papers at the coming convention in September have not yet been designated, it is impossible at this time to give their names; however, we desire to throw out a few hints as to the subjects that will be presented.

Every gathering in America this year, whatever the object of its meeting, can render definite, valuable and far-reaching patriotic service by putting before its members in formal address the purpose and objects of the war as defined by President Wilson in his message to Congress April 2:

"We shall fight for the things which we have always carried nearest our hearts—for democracy, for the right of those who submit to authority to have a voice in their own government, for the rights and liberties of small nations, for a universal dominion of right by such a concert of free peoples as shall bring peace and safety to all nations and make the world itself at last free."

The League to Enforce Peace, of which William H. Taft is president, will supply a speaker to inform the members of our organization of the reasons why the United States has entered into the world conflict, and to solicit their cooperation in securing the establishment of a permanent league of nations to guarantee the world against wars in the future.

One of the most important considerations confronting our civilian hospitals today is the necessary reorganization that must be accomplished in order that the fullest cooperation may be rendered to the government. This subject, bristling as it does with vital points of interest to all, will be presented by Dr. W. H. Smith, of Baltimore, who for some time has been on duty in the surgeon general's office in Washington with the rank of major. Discussion will be opened by another leader of our organization, Dr. John A. Hornsby, who has also been commissioned a major in the Medical Corps and is taking a very active part in medico-military affairs in Chicago.

After learning of the most advanced ideas regarding reorganization for war, our members will want to know just what their hospitals can do to assist the government and what will be expected of them in this connection. This subject will probably be handled by Col. Jefferson R. Kean, director of military relief of the American Red Cross. Colonel Kean has one of the biggest tasks before him that has ever been thrown upon the shoulders of a single army officer, and he will welcome the opportunity to tell the American Hospital Association just how each individual member can help.

The United States is ever mindful, even during periods of stress, of the civilian population, and, while most of our resources must of necessity be conserved for the protection of our country, there is and always will be an immense civilian population that requires just as much attention during the progress of war as at any other time. The surgeon general of the United States Public Health Service, General Rupert Blue, or his representative will therefore speak upon the preservation of the health of the civilian population during the war and will point out what the civilian hospital may do to aid the community and the government.

The foregoing is merely a suggestion of the topics already listed that have a direct bearing upon the efforts of the government to coordinate every possible agency in the country; there are many more subjects under consideration upon our Cleveland program that are of equal importance, but it is obvious that we cannot list them all here.

RED CROSS NURSES

For some time past numerous protests have poured into this office, and others have been sent to the various officials of the American Red Cross, objecting to the unjust discrimination by that body against registered graduate nurses who happened to be trained in a hospital that could not claim a minimum average of fifty beds. This matter was very carefully discussed by the trustees at the last meeting, and it was generally agreed that it was an unreasonable and unjust discrimination against a great number of qualified women who were ready and willing to serve the government during the present crisis. While the majority of those present were in favor of a resolution addressed to the Red Cross calling attention to the discriminating clause and requesting its abrogation at least during the war, it was deemed wise to submit it to the absent members before final adoption. The secretary sent a copy of the resolution to the two absent members, and upon receiving their replies reported its adoption. Copies were sent forthwith to the various officers of the American Red Cross.

The trustees are determined to use every legitimate means to commit the highest officials of the government to the principle that nurses who have met the full profes-

sional requirements of their respective states should be eligible, so far as professional requirements are concerned, for any branch of the national service.

RESOLUTION

WHEREAS, We are informed that under the present requirements of the American National Red Cross, nurses who graduate from hospitals having a daily average of less than 50 patients are not eligible for appointment as Red Cross nurses, and

WHEREAS, Many such nurses are anxious and willing to offer their services as a patriotic duty, and

WHEREAS, The services of all available nurses may be of the utmost importance in the care of the sick and wounded resulting from the perils of war, and

WHEREAS, The American National Red Cross, through its officials, may readily satisfy itself by means of proper regulations and examinations of the capacity of applicants to competently serve; now, therefore, be it

RESOLVED, That we, the trustees of the American Hospital Association, respectfully recommend that at least during the present exigency the regulations above referred to might be suspended in order that those women who are otherwise qualified to render valuable service shall not be debarred from patriotic service because thereof.

LETTER TO HOSPITAL TRUSTEES

The trustees of the American Hospital Association authorized the secretary to send to the various boards of hospital trustees a letter calling attention to the manifold advantages of attendance at conventions, and urging the hospitals to meet the expense incident to the trip. The letter will be sent out probably before this bulletin is in print, and will be inclosed in an envelope addressed to each member of the association, together with a tentative program for the coming convention. The letter should be formally submitted to the board of trustees of each hospital if the recipient believes that such a letter will be of any help.

SPECIAL RAILROAD RATES

The railroads have granted this year our request for special rates to Cleveland, and members may secure definite information regarding them from local railroad officials. The rates are granted on condition that tickets be purchased between certain dates and are not good after a specified period.

REGISTRATION BUREAU

Hospitals desiring the service of this bureau are requested to furnish us with definite information regarding vacancies to be filled in order to save time and expense. Certain information is always necessary; for instance, the salary to be paid, the number of beds, the number of graduate nurses employed. Much of this information is usually contained in the annual report, a copy of which should always be sent.

A SEX HYGIENE EXHIBIT FOR RECRUITS

Educational Measures Devised by the Missouri State Social Hygiene Society for the Protection of Recruits at Jefferson Barracks

Shortly after the order for mobilization was given, the Missouri State Social Hygiene Society began preparations looking toward the protection of recruits against venereal infection through educational means. It was thought that the most effective way of educating the men would be through a specially prepared exhibit on sex hygiene and the venereal diseases. Permission was first secured through Major Pipes, medical officer of Jefferson Barracks, to place the exhibit at that camp. A tent measuring 12 feet by 20 feet, with 6-foot walls, was supplied by the St. Louis Public Health League and erected on the grounds near the Y. M. C. A. recreation tent. Along the midline of the floor of the tent a vertical wooden framework was built and on it were suspended the pictures making up the exhibit. There are twenty-two of these placards, each measuring 22 inches by 28 inches, suitably framed and artistically prepared, and arranged so that the visitor by beginning at No. 1 and following along in consecutive order, will have obtained a fair comprehension of sex hygiene and the cause, diagnosis, and prevention of veneral disease. The general arrangement of each placard is this: Above, in heavy black type, appears a question such as, "What is stricture and how is it caused?" or "When is it safe for one who has had syphilis to marry?" Below this question is an illustration under which appears the answer to the question and an explanation of the picture. The text is concise and easily understood. The illustrations consist of diagrammatic and anatomical drawings and photographs of actual cases, and colored pictures designed to add to the interest of the exhibit.

Through the generosity of a friend, sufficient funds were secured to employ a young man to act as attendant. He is stationed at the tent each day where he answers questions, explains difficult passages and gives personal advice. He also distributes literature. Four specially prepared pamphlets are being used, "Sex Hygiene for Young Men," by Dr. Belfield; "Friend or Enemy," by Dr. Exner; "Keep in Fighting Trim," American Social Hygiene Association, "Venereal Diseases," a reprint of the pamphlet published by the New York Board of Health. Some 200 men visit the exhibit daily, and it has the indorsement and commendation of the chief medical officer and of many physicians and social workers who have seen it. It was recently visited by an agent from the War Department, who pronounced it the best he had seen thus far in his tour of training stations and mobilization camps. Analyzing questions which are asked, it is quite evident that there is a woeful lack of correct knowledge on the part of young men, especially those coming from smaller towns, on this vital subject. Questions such as, "Does gonorrhea ever run into syphilis?" "Is 606 a sure cure?" "Is syphilis curable?" are asked with great frequency. Through the knowledge thus gained the society hopes to amplify and improve the exhibit so that it will meet the needs of the men.

Perhaps the most important mobilization problem is that of the prevention of venereal disease. While it is true that some men will not be restrained from sex license by the knowledge of sex hygiene, it cannot be denied that the facts obtained by this method will aid many recruits in practicing continence, which, for the first time in history, has been recognized by the army and navy officials of a great nation as "the best safeguard against venereal infection." Moreover, by impressing those who are already or who will become infected, with the importance of early and thorough treatment, the spread of the disease will surely be limited. Anything which will keep a fighting man sound and healthy is of the greatest importance because a man who has been infected, no matter how mildly, is placed on the sick list and becomes a burden instead of an asset to the nation. Previous wars have invariably been followed by an increase of gonorrhea and syphilis among the general population. If the soldier can be sent back home with a sane knowledge of sex hygiene and a fear of the venereal diseases instead of an infection, we may hope that history may not repeat itself this time.

This plan as carried out by the Missouri Social Hygiene Society is supervised by the American Social Hygiene Association, the only association in this field recognized by the National Board of Defense.—Editorial, Jour. Missouri State Med. Assn.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.
Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, O.

How the Dietitian Can Help You

BY LENNA FRANCES COOPER, Director of the Battle Creek Sanitarium School of Home Economics, Battle Creek, Mich.

A hundred years ago nursing as a profession was quite as little known as is now the work of the dietitian. Year by year the work of the nurse has increased in efficiency and popularity, so that now it is a well-standardized profession and the name is a household word. "Dietitian" is a comparatively new name and likewise a new profession. The dietitian's profession is closely allied to the nurse's, and is evidently destined to almost as great if not as great popularity. Even now the dietitian is an indispensable member of the staff in many hospitals, and yearly other hospitals are adding her to their faculty. But there still exists, in the minds not only of the laity, but of many of the medical profession as well, a very indefinite idea of what a dietitian is trained to do and how she can serve an institution or the medical profession.

One physician, who was desirous of bringing the efficiency of his hospital up to the highest point possible and was, therefore, desirous of adding a dietitian to his staff, made inquiry as to the duties of such a member and also asked if she would be willing to occupy her spare time by doing clerical work! A perfectly legitimate question to ask and one which probably almost any dietitian would answer in the affirmative if such a thing were possible. However, there is scarcely a hospital in which such an arrangement would be a practical one, for the dietitian is trained to serve the institution in a much greater capacity than that of a clerk. There are also hospitals in which the dietitian is not serving in her most useful capacity, probably because the work in that particular institution was organized a number of years ago, before the dietitian was trained to do as many things as she is now prepared to accomplish. It is the purpose of this article to point out some of the ways in which she can serve and some of the responsibilities she is prepared to assume.

In the hospital her duties may fall into one of three groups, viz.: (1) to have charge of the diet kitchen; (2) to supervise the culinary and dietary departments; and (3) to take charge of all of the household departments, in which case she is generally called dietitian-housekeeper. If her duties come under the first group, she will have the following responsibilities:

1. Planning and supervision of all special and weighed diets and nourishment.
2. Catering to private patients.
3. Ordering supplies from steward or storeroom.
4. Supervision of the preparation and serving of all food prepared in the diet kitchen.
5. Supervision of the cleaning in diet kitchen.
6. Teaching of dietetics, foods, and cookery to nurses.

Such a dietitian is usually responsible to the superintendent of nurses and is ranked as a member of the training-school faculty. If this dietitian is a well-trained woman and has executive ability, she may serve the hospital in a larger field by assuming entire charge of the food problem, as outlined under the second group of duties. In this case her duties are largely administrative, although she still has the supervision of the diet kitchen, having as an assistant a competent nurse or a second dietitian. In addition to being responsible for the special diets, she will have the following duties:

1. Planning menus for the household, including staff, nurses, domestic help and patients.
2. Taking entire charge of kitchen, serving rooms and dining rooms.
3. Hiring help in her departments.
4. Buying of the food (this she may or may not do).
5. Checking up the bills of the departments.
6. Teaching the nurses.

This *managing* dietitian is usually responsible to the superintendent of the hospital and is a member of the staff.

The third type of dietitian, the dietitian-housekeeper, is also occupied chiefly with administrative affairs and is in reality a *managing* dietitian. Her responsibilities are the same as the second type of dietitian, i. e., manager of the food departments, and in addition she has the following duties:

1. Supervision of all household cleaning.
2. Supervision of laundry (if done on the premises).
3. Looking after the linen, including the mending.
4. Employing of all domestic help.

The dietitian-housekeeper is also responsible to the superintendent of the hospital. This type of work is usually done in the small hospital, since the work in the food department alone, in a larger hospital, is all that one person can handle successfully.

The duties, as outlined above, may be varied to meet the needs of the institution, but in the main they represent what may logically be expected of the dietitian.

Are you getting from your dietitian the best service she is capable of rendering to your institution? Is she capable of supervising your food department instead of being limited to the diet kitchen only? A trained woman in charge of your food department can save you money, for she understands not only food values, but monetary values of foods as well. She can feed your hospital family more satisfactorily than an untrained person because she knows the bodily needs and how to meet them.

There is still another way in which some dietitians can serve their hospital, but generally lack the opportunity, i. e., as consulting dietitians. Many of the hospital patients need specific instruction in the selection and preparation of food after leaving the hospital and ofttimes are very greatly in need, while at the hospital, of some individual attention, which the dietitian could render if there were an opportunity for her to come in contact with the patients. Why not allow her to make the rounds of the wards either with the doctor or with the ward nurse? Let her ascertain whether the food being served agrees with the patient and if it is palatable. Science has demonstrated conclusively that appetite plays an important part in the digestion of food. This principle should be made of practical use in the care of the sick.

It may be that for special reasons your hospital does not need the services of a trained woman for full time, in which case you will undoubtedly need a *teaching* dietitian who can come to the hospital for certain periods during the year to give the necessary instruction in foods, cookery, and dietetics.

If you are in private practice, why not have for your office assistant one who can do your laboratory work, attend to the office routine and look after your special diets as well? There are women who are qualified for filling such positions.

The work, then, of the dietitian naturally falls into three classes, i. e.: (1) *managing*, where the work is chiefly administrative; (2) *teaching*, where the work includes only the teaching of subjects relating to dietetics; and (3) medical, where the work is more specifically the planning and preparation of diet in disease.

The Conservation of Food

BY DR. J. A. WESENER and GEORGE L. TELLER of the Columbus Laboratories, Chicago.

[Continued from the July issue.]

It is a source of much satisfaction to us to see in the newspapers that Commissioner Hoover has decided that no wheat is to go abroad, that the milling is to be done in this country, and that the finished article, flour, is to be shipped for export. This is a proper and important economic measure. It leaves the bran and other offals for home stock-feeding and fertilization of the land. While in this way we will send the concentrated refined food abroad, we will retain the coarse, nutritional elements for both animals and the land. The other day we noticed a squib in the paper by our colleague, Dr. Wiley, recommending two wheatless days a week. At first blush this looks like a very excellent conservation measure, but the moral connected with this is, why should we make ourselves martyrs, or be the pincushion of the affliction when other means and measures can be used which would meet the purpose of conservation in a much more effective and satisfactory manner? It seems that the purpose of the writers on these subjects is to impress upon the American people that "war is hell" and therefore they must immediately assume an attitude of suffering to harmonize with the prevailing conditions.

Now, our attitude is an entirely different one. We believe in rational conservation of the food, based upon keen efficiency. We cannot see any difference in the saving of foodstuffs by denying oneself for two wheatless days per week when the same wheat product can be diluted and lengthened by blending in with it other cereals, and this can be easily carried out by taking all of the flour produced from the wheat, which represents about 75 percent, and blending with it other cereals, such as corn and barley flour, cornstarch and other cereals. These cereals can be blended in with the wheat flour to the extent of possibly 30 percent, depending upon the nature of the wheat flour to which these are added. In conserving in this manner, no American food standards are torn down. No denial of good, wholesome food is then necessary, or at least not until the entire supply is so far decreased that denial becomes an actual necessity. What we want to emphasize is to make use of all good, wholesome cereals, and especially those that are selling for less money than wheat, for blending, and thereby enlarging our foodstuffs. Bread made from such blends, with corn and wheat flour as the bases, will produce an article which is up to the esthetic American food requirements. In working in this way you do not disarrange the standard as to appearance, taste, and nutritive value of the finished article, "bread." Now, then, after these means have been exhausted, it will be sufficient time to undertake more drastic measures. This can be done by making other blends, which will not quite come up to our standards, but nevertheless will give an article which will be wholesome and nourishing. It is also our opinion that, proceeding in this way, the conservation will have a strong bearing on the law of supply and demand. If, for example, the American nation consumes 120,000,000 barrels of wheat flour per year, and this is lengthened with 20 percent of corn products, there would be an increase of 24,000,000 barrels of flour per annum. Corn always being the more abundant cereal, sells for considerably less than does the cereal wheat. Analyzing these startling figures from a board of trade point of view, it means the same thing as would the introduction of nearly 100,000,000 bushels of wheat. This additional amount does not exist, but in the law of economy acts in the manner on the prices as though the 100,000,000 bushels of wheat actually existed. What will be the effect of the unexpected offer of 100,000,000 bushels of wheat on the market? It will cause a drop in the price of wheat and tend to stabilize the prices of both of these cereals more in keeping with normal market conditions.

[To be continued.]

The Rotary Club of Indianapolis has issued a four-page pamphlet in the interests of food conservation, which contains more information in a concise but easily comprehended form than any publication which has yet come to our notice.

The first cover page is designed to attract attention and appeal to the patriotism of the public. "How You Can Do Your Bit and Help Our Boys Win the War" is placed conspicuously at the top of the page. In large type across the inside pages is the statement of the secretary of agriculture relative to $700,000,000 being wasted in America every year; in smaller type a number of valuable points are discussed briefly, but in a way that impresses one with the fact that they are vital; such as, "How This Criminal Waste is Made Possible," "How to Eliminate Waste," "What Your Food Must Do," "Classification of Common Foods According to Chief Food Constituents." The fourth page is devoted to recipes and menus which are not only possible, but practical.

These pamphlets have been given wide distribution through the schoolchildren.

Diet is a really serious matter and many people suffer as much from dietary eccentricities and food fads as from actual disease. The average individual can eat good, plain, wholesome food in moderation all his life without ever being aware that he has a digestive apparatus. Starvation to cure a fancied ailment or to reduce an expansive waist line has shortened many lives, just as indiscretion in the opposite direction. Certain diseases do require a particular diet, but this should be chosen by a physician of skill and not self-prescribed. The self-prescriber often has a fool for a patient.—Health News, U. S. Public Health Service.

Dr. John Lloyd, for the last seven years superintendent of the Virginia State Tuberculosis Sanatorium, at Catawba, has accepted the superintendency of the Iola Sanatorium, a 250-bed institution maintained at Rochester, N. Y., by Monroe County. Dr. Lloyd is a graduate in liberal arts and medicine from the University of Virginia and is 38 years of age. He will assume his new duties September 1, succeeding Dr. Montgomery E. Leary, resigned.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army

The First Children's Hospital in Norway (Det forste barne-hospital i Norge). Tidsskrift f. d. norske Laegefor., Kristiania, 1917, XXXVII, No. 8.

As the Herman Francke Home for Boys was moved from Christiania into the country, the fine three-story building of the institution is to be converted into a children's hospital. The building is to be remodeled on the plan of the Dr. Barnardo Children's Hospital in London. It has, as it now stands, room for sixty patients, but it is planned to enlarge the hospital so as to fill all the demands made upon it. This is the first children's hospital in Norway, as heretofore children have been treated in special divisions of the general hospitals.

A Special Center for the Examination and Complementary Treatment of Discharged Wounded Soldiers (Un centre spécial pour examen et traitement complémentaire des blessés réformés). Drs. J. Camus and O. Riche. Paris, méd., 1916, VI, No. 41.

In May, 1916, an institution was established in Paris for the purpose of examining and treating permanently disabled wounded soldiers. Its purpose is to ascertain the amount of disability and to fix the indemnity to be paid by the state. The institution is splendidly equipped with Zander, x-ray, and electrical apparatus, etc., as well as with the delicate instruments (goniometer, dynamoergograph, reflexometer, Marey tambour, etc.) to ascertain the amount of disability. In a great number of cases the pension allowed by the government has been reduced; in others it has been increased.

A Surgical Automobile Ambulance (Une ambulance chirurgicale automobile). Dr. R. Monod. Paris méd., 1916, VI, No. 32.

The surgical automobile ambulances were established in the French medical service with a view to performing operations in the field. The medical personnel consists of 4 surgeons and 4 physicians, an x-ray man, 10 students of medicine, and 16 male nurses. The necessary apparatus is transported on three trucks. One truck carries a large boiler, two autoclaves, two kettles, and the radiators for the central heating apparatus. The second truck carries the x-ray apparatus and the third the surgical instruments, dressing material and the pharmacy. On the road these trucks make 15 kilometers (between 9 and 10 miles) per hour. Arriving at the place of their destination, the operation pavilion is at once mounted. It consists of boards, and measures 14.45 by 4.85 meters (about 47½ by 16 feet). It contains three rooms, two operation and one sterilization room. This pavilion is so simple in its construction that it can be put up within three hours.

Some Observations on Treatment of Pulmonary Tuberculosis in the San Juan del Monte Sanatorium (Algunas observaciones sobre el tratamiento de la tuberculosis pulmonar en el sanatorio de San Juan del Monte). Drs. J. Fabella and A. Hernandez. Rev. filippina de med. y farmacia, Manila, 1917, VIII, No. 1.

The San Juan del Monte Sanatorium was founded by the Antituberculosis Society of the Philippines. Patients from all social classes are received, but only incipient and moderately advanced cases are admitted. Advanced cases are sent to the San Lazaro Hospital in Manila. From fifty to sixty patients are treated every month at San Juan del Monte. About 25 percent of the patients with incipient cases are cured in from six months to one year, and 33 percent leave the sanatorium much improved. In the moderately advanced cases only 13⅓ percent were markedly improved. In the treatment tuberculin T. R. was employed in a few cases with much success.

Transportation of Wounded Soldiers by Aeroplane (Le transport des blessés en aéroplane). Dr. R. Blanchard. Paris méd., 1916, VI, No. 29.

As far back as 1912 Dr. Duchaussoy proposed to the Ladies' Society of the French Red Cross to utilize the aeroplane for the transportation of wounded soldiers. The question was submitted to the minister of war, who considered the plan impracticable, and nothing was done at that time. But when the war came, the idea of Dr. Duchaussoy was soon to be realized by French aviators in Serbia. When Prizrend was threatened by the advancing Bulgars the question of removing the wounded became pressing. There were six French aeroplanes in the city. These six aeroplanes carried six officers and seven French soldiers to places of safety. In some cases the wounded were carried across the mountains to Scutari, a distance of 150 kilometers (over 90 miles). Thus aerial transportation of the wounded is no longer theoretical, but should receive the serious attention of the medical service.

Hopital No. 32 Bis, Hopital Francais de New York, Passy par Vernon (Yonne), France. Alonzo M. Nodine, D. D. S. New York Med. Jour., 1917, CV, No. 23.

The hospital described by Dr. Nodine is about 60 miles southeast of Paris and 50 miles from Verdun, from which it receives its wounded. It is known also as the Fitzgerald Foundation and is under the administration of the French Hospital of New York. Dr. Nodine, who returned from France November 4, organized the department of oral and dental surgery in this hospital.

It is lodged in the historic Chateau de Passy, which dates back to the tenth century. There is room for 165 beds in the wards and in addition a large tent can accommodate forty beds. The large wards are in the chateau proper, the smaller in buildings surrounding one of the courts. All kinds of wounds, involving every part of the body and of every degree of severity, are found in the wounded received in this hospital, which has received as many as eighty wounded in a day. On a notification of half an hour the hospital can transport sixty wounded in its ambulances from the railroad station about three miles away.

Another example of its efficiency is the fact that excellent food in good variety is furnished at a cost of but 40 cents a person per diem for the entire organization. The entire cost for each patient per diem ranges from $1.25 to $1.50 a day, depending on the number of patients. The hospital is said to be unique among French hospitals in

receiving no grants or subsidies from the government in the shape of either supplies or money.

The hospital is equipped with its own electric light plant, hot and cold water supply system, disinfecting plant, steam heat, mechanotherapy department, thermotherapy department, electrodiagnostic department, bacteriological laboratory, x-ray and fluoroscope laboratory, machine shop, carpenter shop, laundry, five automobiles and ambulances, vegetable garden, pigs, pheasants, poultry, rabbits, and lambs.

The médecins chefs have been some of the most distinguished surgeons in the United States, and the assisting surgeons are from the best hospitals in the United States and Canada. The work here, especially the treatment of fractures, has received high praise. The hospital supplies its patients with artificial limbs of the best American design and construction.

The department of dental and oral surgery, which is particularly described by Dr. Nodine, is equipped to take care of the wounds of the face and jaw, as well as do all the necessary dental work and is now organized for continuous service to the end of the war.

Organization and Functioning of a Work Cure in a People's Sanatorium (Organisation et mise en œuvre d'une cure de travail dans un sanatorium populaire). Drs. F. Dumarest and A. Vigne. Paris méd., 1916, VI, No. 30.

Frimley Tuberculosis Sanatorium, which was until lately under the management of Dr. Paterson, receives its patients from Brompton Hospital in London. They are very carefully selected and the patients chosen are only such as offer the possibility of a cure. If on his arrival at the sanatorium the patient shows any febrile condition, he is first completely immobilized in bed for a few days until the fever has completely disappeared. Then he is allowed to get up and take short walks. Still later he is gradually put to work. At first he carries small burdens, which are gradually increased in weight. Then he is put to work with a shovel in the garden, the work being slowly increased day by day. The female patients perform similar graduated exercises. This method has proved a great success, and it has been introduced in a number of sanatoriums in England and also in Germany and the United States. Such an institution was established in France at Hauteville in 1909. The exercises are similar to those of the Frimley Sanatorium, and the results have been very good so far.

St. Luke's Hospital for Chinese of the American Church Mission, Shanghai. China Med. Jour., Shanghai, 1917, XXXI, No. 1.

Fifty years ago a dispensary was opened in Shanghai by Archdeacon Thompson and Rev. H. N. Woo with a capital fund of $84. From the start patients came in crowds. An appeal made in the local press for additional funds elicited subscriptions amounting to 700 taels. With this sum thirteen houses were purchased for 10 taels, and a small hospital was built on the land thus acquired. These were the beginnings of St. Luke's Hospital. The hospital grew and was gradually enlarged. In 1901 Dr. Jefferys became a member of the staff. Largely through his efforts it became possible to tear down the old buildings and to erect the present modern structure. But even this building has become unequal to the demands made upon it, and, as the grounds are too limited to permit of a permanent extension, it is now intended to select a new site on which to erect a new hospital. It is confidently expected that Chinese and foreigners in Shanghai will contribute liberally for this purpose.

The Prophylaxis of Venereal Diseases. Mazyck P. Ravenel, M. D. Social Hygiene, 1917, III, No. 2.

Statistics of venereal diseases, except for certain groups, as the Army and the Navy, are lacking. Dr. Ravenel says that registration must be insisted on for these diseases just as for smallpox and diphtheria. Public health laboratories for diagnosis are of prime importance. The importance of laboratory control over gonorrhea is not yet realized. Although gonorrhea is much more prevalent than syphilis, the number of specimens from suspected cases of syphilis exceed those from gonorrhea by approximately three to one.

It is unfortunate from the public health point of view that in most cases the symptoms of venereal disease are so mild as to make it impossible to keep the patients in hospital until they have ceased to be dangerous to the community. The majority of hospitals, however, bar such patients at the stage at which they are most dangerous.

Dispensaries play a large part in the treatment of venereal patients, but, even when well conducted, leave much to be desired because patients will not continue treatment until cured. The figures from four of the best New York dispensaries show that but 8 percent of gonorrhea patients were discharged as cured. In Boston, 11.4 percent of 450 cases of gonorrhea treated at the Boston Dispensary were reported as cured. In a series treated at the Lakeside Hospital Dispensary in Cleveland, 12 percent were cured.

Ravenel reviews the various measures of prophylaxis—control of prostitution and alcohol, suppression of "anatomical museums" and "men's specialists," rational legislation against the marriage of persons with venereal disease, encouragement of early marriage, and education and moral training. He concludes that the utilization of every agency is necessary for the attainment of any degree of success.

The Protection of the Poor Insane (Il patrocinio dei pazzi poveri). Dr. L. Bignami. Osp. maggiore, Milano, 1917, V, No. 1.

In Italy, as in all other countries, the care and protection of the insane has made great progress during the last fifty years. Among the men who worked incessantly for the betterment of the condition of the insane Luigi Lolli stands first. He founded the Manicomium of Imola, which is capable of caring for 800 patients and which is the largest institution of its kind in Italy. In his work Dr. Lolli found that the patients who were cured and left the hospital were received with indifference and suspicion by the people among whom they lived. There have long been societies for the protection of these patients in England and France. Lolli was the first to organize such a society in Italy. Through his efforts the Society for the Protection of the Insane in the Province of Bologna was established by royal decree. The purpose of this society is to assist poor patients who leave the hospital cured until they are able to make a living for themselves, and to help poor women whose husbands are under treatment in the hospital, and to assist them in the education of their children. Through the efforts of Dr. Lolli it was decided to turn the proceeds of the patients' work during their stay in the hospital over to this society in order to enable it better to carry out its charitable purposes. In many of the other provinces of Italy there exists absolutely no provision for the care of patients who are discharged from the hospitals as cured.

The New Gynecological Clinic of the University of Munich. München. med. Wchenschr., 1916, LXIII, No. 51.

This institution was opened on December 17 last. It is a magnificent structure and the largest of its kind in Germany. The ground comprises 13,236 square meters and cost the city $200,000. The building costs were 3,100,000 marks ($775,000); the expense for the furnishings amounted to 900,000 marks ($225,000). In the center of the building is an immense courtyard. Almost all the sick rooms open into this spacious court. Though the hospital is located in a populous part of the city, the patients are by this arrangement protected from the noise of the streets.

The Modern Hospital—Its Form, Function, and Work. Henry A. Christian, M. D. New York State Journal of Medicine, 1917, XVII, No. 5.

Dr. Christian says that hospitals are seldom beautiful, because medical men know little or nothing of architecture and architects are likewise generally ignorant of medicine. Professional requirements within dominate the exterior, and the architect produces an unsatisfactory and unlovely compromise. The sky-scraper type of hospital is the expression of the need for a hospital in a thickly congested district, where land values are great. A cottage type is adapted to the needs of those chronically ill in mind or body, for whom outdoor occupation and not merely the passive enjoyment of air is needed. The pavilion type is intermediate between the sky-scraper and the cottage type and combines the advantages of the two. The pavilion type is just now preferred for large hospitals for patients acutely ill with non-contagious diseases, since it gives an abundance of air and light and still does not require so much land that it cannot be placed near congested districts. The foregoing types comprise almost all of the larger American hospitals. The small hospital usually is but a single building of moderate height, intermediate between the single building of the pavilon type and the sky-scraper. While the average of American hospital construction is good, the chief criticisms that should be made of them are that they have cost too much and that their construction and equipment is better adapted to the work of the surgeon than to that of the physician. Hospital trustees and staff usually spend too large a proportion of the available funds on buildings and too little on equipment and maintenance. Too much of what is spent on construction is paid for things which do not materially enhance the comfort of the patients or the efficiency of their treatment. If no one in a hospital—superintendent, staff member, nurses, or patient—knows how a given feature helps the patient, directly or indirectly, it may be set down as useless. To spend more of the available funds on buildings for a hospital for the sake of creating a handsome memorial, for instance, is in Dr. Christian's opinion little short of misappropriation of funds. As to the criticism that the construction and equipment of American hospitals are better adapted to surgical than to medical work, Dr. Christian does not imply that surgical equipment is better than it should be, but that medical work is generally handicapped by insufficient laboratory space, too few trained technicians for the numerous tests used in the medical diagnosis, and lack of space and equipment for various forms of hydrotherapy, mechanotherapy, accurate dieting, etc.

The alleviation of suffering and the cure of illness constitute the chief but not the sole functions of the hospital. Its educative and investigative functions are equally important. The education imparted to the nurses, medical students, and graduate physicians, and the education given to patients are both important. The investigation carried on in the hospital freshens the daily routine of medical practice and administration. As to organization, Dr. Christian believes that there has been too much tendency to advise a fairly uniform plan for all hospitals, with too little consideration for individual variations and local conditions. From experiments in staff organization now under way much could be learned. In the older organizations the superintendent was the man most constantly "on the job" who represented continuity of policy. In some hospitals now which have chiefs-of-service continually on duty, it is the superintendent and his assistants, not the professional staff, whose work takes them away from the hospital part of the day. New relationships constantly will have to be worked out.

Cardiac Clinics. J. S. Ferguson, M. D. Archives of Pediatrics, XXXIV, No. 4.

Because death from heart disease is comparatively infrequent among children, the medical profession has been inclined to neglect the cardiac problems of childhood. While few children die from this cause, however, many carry the burden of cardiac disability on into maturity. The relatively small ratio of cardiac cases (less than 1 percent) announced as found among school children in 1913 surprised Dr. Ferguson by its lack of agreement with experience in dispensary cases, in which there is a very considerable proportion of cardiac lesions. Believing that conditions under which the school examinations were made were not such as to disclose the true conditions, Dr. Ferguson suggested to the Social Service Department of Bellevue Hospital that a survey of neighborhood children be made. This was accomplished in the summer of 1915 with the cooperation of the Department of Education, and disclosed about 7 percent of organic or functional cardiac murmurs in a large group of nearby school children. This group of children with "lame hearts" is relatively enormous. In order to make a preliminary study of the facts to ascertain what might be done in a small way, a group of cardiac children was organized in connection with Dr. Ferguson's clinic at Bellevue late in 1913, and in 1916 was merged into a larger group in the clinic now under the direction of Dr. Charles H. Smith. Dr. Ferguson cites an illustrative case of one child in whom was found a loud aortic diastolic murmur, hypertrophy, and beginning decompensation. The child's family, which lived four flights up, was induced to remove to a lower floor and to follow some simple rules of hygiene and exercise, but efforts to secure for the child instruction in a schoolroom located on the lower floor of the school building were unavailing. Dr. Ferguson says:

"We establish open-air classes for the anemic and the tubercular, we send carriages for the crippled and automobiles for the poliomyelitic—when, when will we learn to admit the crippled heart to the same privileges as the crippled legs? There are less than 5,000 crippled legs in New York City as a result of the recent appalling epidemic of poliomyelitis among our children, and we are doing much to alleviate their suffering; there are more than 25,000 crippled hearts (Holt) among the school children of New York, and we are offering them little or no assistance to facilitate their recovery."

He suggests that by competent recognition of the possible sources of cardiac diseases, by carefully following up cases at their homes, by studying the epidemiology, the cardiac clinic with an effective social service can do much for the prevention of heart disease in children and can thereby reduce a fertile source of adult morbidity and adult mortality.

VOLUNTEER WORKERS IN THE DISPENSARY

A Plan for Supplying the Needs Produced by the Scarcity of Medical Men Due to the War—Better Care Provided by the Use of Volunteer Workers

Dr. Charles Hendee Smith remarks, in the *Journal of the American Medical Association*, that the dispensary problem in New York and other large cities is always an acute one. The out-patient departments never have physicians enough to man them properly. The result has been careless, hasty work with short and incomplete histories, "snap" diagnoses, and unsatisfactory treatment. The outbreak of the war has only intensified this situation, since the physicians who work in dispensaries are mostly young men able to volunteer for military service. The war, moreover, will surely increase the number of patients applying for treatment because the higher cost of living will increase relative poverty and the removal of large numbers of soldiers from the families of the poor will diminish family incomes.

A plan devised by the children's medical division of Bellevue Hospital has been successfully put into practice. The out-patient department has been reorganized and an effort has been made to raise the standard of work. Special classes have been formed for conditions which lend themselves to class or group treatment, such as infant feeding, heart disease, malnutrition and syphilis. Each man in the department devotes one day a week to the general clinic, one day to the infant-feeding class, and one day to one of the other special classes. Thus each man is free from routine on one of his three days and is given time to work on a special problem. Of the eighteen physicians and two interns working in this department (with an average attendance of about nine physicians a day), however, several were called into military service at the outbreak of the war and others will soon be called. To obtain other physicians appears hopeless. There are no funds available for paying clerks, yet something must be done if old methods of hasty, careless work are not to be resumed.

A plan was, therefore, evolved by which volunteer workers are enrolled who take histories of new patients. By the use of form histories, it is said, an untrained but intelligent woman can take a good history after a little instruction and with two or three days' experience. The physician who examines the child can, in a very short time, amend or add to the history as may be necessary. The volunteers during the taking of the history discuss with the mother the habits and hygiene of the child and suggest the importance of a proper diet, cleanliness, fresh air, sleeping hours, etc., and give out a diet list and a slip with general rules for the care of the child. The mother feels that the volunteer is not a mere clerk, and the volunteer has an interest and sense of responsibility which relieves the tedium of the history-taking. The child is then weighed and measured and the temperature taken, all of which, Dr. Smith remarks, can be done by anyone with a little experience. The baby is then stripped for examination and covered with a blanket while waiting for the physician. The volunteer remains during the examination so that she may know the diagnosis and see any point of interest. The physician writes the physical examination, which takes only a moment with the printed form. He then tells the mother and the volunteer what should be done for the child and writes out the prescription. The volunteer writes out the advice given, copies the prescription on the chart, sees that the mother understands the directions, emphasizes the important ones and tells the patient when to return. Most of this time-consuming work, though it should be done for every patient, is ordinarily omitted when the hurried physician is responsible for it all. This plan is said to save about three-fourths of the physician's time. Moreover, every patient leaves the department with a fairly accurate history, a complete examination, a diet list, instructions in hygiene, and with better treatment and advice than can be given by any imaginable system in which the physician would have to do all the work. The human interest in the problem, moreover, arouses the enthusiasm of the volunteer, and this is a valuable element.

Dr. Smith suggests that there is no good reason why the volunteer system, which has been adopted in some other hospitals since it has been started at Bellevue, should not be developed widely and its scope increased into further aid to the social service work in the homes of the poor.

"SISTER" NURSES IN BRITISH HOSPITALS

There Are Ranks in the Wards as Well as in the Trenches —What Constitutes a "Strafer"

The following explanation of the nursing hierarchy in British military hospitals is apparently by a wounded officer who is able to "sit up and take notice." He writes in the *Morning Post:*

"It is etiquette to call her always 'sister,' though technically 'sister' is an intermediate grade between 'nurse' and 'matron.' Matron is a great dignitary. She has, in the language of the bar, 'taken silk,' and when her silk gown rustles into the room it is etiquette for officers to stand up, provided they have legs and strength to stand up. Otherwise you 'come to attention' by smiling as well as you can; a respectful, cheerful, but not an hilarious or free-and-easy smile. It should convey the message that you are having the time of your life in the best possible of hospitals under the best possible of matrons. The sister whose patient you are will be very much hurt if you do not smile properly at Matron.

"A 'strafer' is a sister who by ten years or so of hard, anxious work and self-denial has reached to the giddy height of £40 a year and a professional skill which saves lives daily and cuts weeks off one's stay in hospital. A good 'strafer' goes over a wound with the enthusiasm of a thrush with a large family going over a lawn for worms. She examines, searches, squeezes, probes, looking out for shed pieces of bone, for 'proud flesh,' for odd corners where inflammatory matter might lurk. She is looking for mischief, and any mischief found is promptly 'strafed.' If it is bad she calls in the doctor; if it is minor she has her own little armory of mischief-breakers, scissors, pincers, nitrate of silver, and the like.

"Of course, matrons are very trying. Somehow they can never learn that cigarette ash on the floor is neither unhygienic nor really untidy; and they expect the masculine mind to conform at short notice to all the ridiculous feminine prejudices about waste-paper, clothes as chair drapes, and so on. Their minds are not broad enough. But there is an element of reason in the objection to keeping bottles in your bed or fruit under your bed.

"But, as I have ventured to hint—differing therein from a very large number of my brother-officers—matrons are not altogether an evil; like adjutants and brigade majors, they are at the worst necessary evils, at the best quite good sorts. But there is one matron-habit that should be dealt with sternly by regulation. If a very pretty nurse is posted to a hospital, Matron generally manages to assign her to the sick sisters' ward.

"What reconciles one to Matron is the discovery sooner or later that despite silk gown and awe-inspiring manner, she is at heart still 'Sister,' ready with skilful aid and encouraging sympathy in case of need. It is a nice etiquette that makes the title 'Sister' general, for it is just sisterly affection which makes the atmosphere of a military hospital so cheering and recreating."

BOOK REVIEWS

Mentally Deficient Children, Their Treatment and Training. By G. E. Shuttleworth, B. A., M. D., etc. Fellow of King's College, London; Hon. Consulting Physician (Formerly Medical Superintendent), Royal Albert Institution, Lancaster, for the Feeble-Minded of the Northern Counties; "Special Schools" Medical Officer, Willesden Education Committee; and Medical Expert, M. A. B. Institution for Improvable Imbeciles, Ealing; and W. A. Potts, M. A., M. D., etc., Medical Officer to the Birmingham Committee for the Care of the Mentally Defective; and Chairman of the After-Care (Special Schools) Committee, Birmingham. Fourth edition. Pp. 284, with 28 illustrations. Cloth, price $2.50 net. P. Blakiston's Son & Co., Philadelphia, 1916.

This little book, first published twelve years ago, has been translated into French and Japanese. This, the fourth, edition has been largely revised and rewritten. It contains a brief historical sketch of the education of mental defectives; a pathological classification of forms of mental deficiency; a discussion of etrology, diagnosis, and prognosis, and of the psychopathies of puberty; an outline of general, medical, and surgical treatment, and of educational, industrial, and moral training. As the authors are English, the book is naturally written from a British point of view so far as institutional work is concerned. The work done in the United States in the care of the feeble-minded and scientific investigation of their condition has not, however, been overlooked. The work contains a large amount of useful information on this subject.

Where Garments and Americans Are Made. Story of Sicher System of Factory Education for Americanization of Foreigners, conducted in cooperation with New York Board of Education—A Challenge to Hyphenatism. By Jessie Howell MacCarthy, formerly teacher at Pratt Institute and Hebrew Technical School for Girls, New York City. Pp. 57, with 6 illustrations. Cloth. Writers' Publishing Co., New York, 1917.

New York, according to Dr. J. H. Finley, of the New York State Poard of Education, is the only state in the Union that has not decreased its illiteracy in the last ten years. This will not continue to be true if the plan introduced by Dudley D. Sicher into the garment factory of D. E. Sicher & Co. is widely adopted. As explained in this little book, Mr. Sicher has organized in the factory of his company a school where girls are taught, during actual working time, the English language and the elements of citizenship and of practical American living by a teacher from the New York public schools. It is said to be "perhaps the only factory school in the world where pupils are paid while learning." For three-quarters of an hour a day each pupil receives practical instruction and at the end of thirty-five weeks the pupil is graduated, in a gown made by herself, with ability to read, write, and speak English and with knowledge of how to use American money, how to write a letter, how to find her way about the city, how to buy and prepare food, something about practical hygiene and the important ordinances of the health and tenement housing laws and the traffic regulations which bear on her own welfare and that of her family. The welfare work of D. E. Sicher & Co. was described by Mrs. Claribel G. Hill in the May number of THE MODERN HOSPITAL (p. 351).

A little essay volunteered by a pupil of the school is reproduced in this little volume, with the author's spelling, construction, and capitalization unaltered. The writer testifies:

"There are many nice and pleasant things what you never find in another factory, it is wrong expression if I say factory because the people they are working there are like a big family. . . .

"It gives me so much pleasure since I am able to read write and speak English that I can say the World is much nicer for me."

The book is not for sale, but is published for free distribution as long as copies last.

Books Received for Review

Handbook of Anatomy, a Complete Compend of Anatomy. Including the Anatomy of the Viscera, a Chapter on Dental Anatomy, Numerous Tables, and Incorporating the Newer Nomenclature Adopted by the German Anatomical Society, Generally Designated the Basle Nomenclature, or BNA. By James K. Young, M. D., F. A. C. S., Professor of Orthopedic Surgery, Philadelphia Polyclinic; Associate Professor of Orthopedic Surgery, University of Pennsylvania; Orthopedic Surgeon to the Philadelphia General Hospital, etc. Fifth edition, revised and enlarged. Pp. 435, with 154 illustrations. Cloth, price $2 net. F. A. Davis Company, London, 1917.

The Starvation Treatment of Diabetes, With a Series of Graduated Diets. By Lewis Webb Hill, M. D., Junior Assistant Visiting Physician, Children's Hospital, Boston; Alumni Assistant in Pediatrics, Harvard Medical School; and Rena S. Eckman, Dietitian, Massachusetts General Hospital, Boston, 1911-1916; with an Introduction by Richard C. Cabot, M. D. Third edition. Pp. 134. Cloth, price $1.25. W. M. Leonard, Boston, 1917.

Principles of Medical Treatment. By George Cheever Shattuck, M. D., Assistant Physician to the Massachusetts General Hospital. Third edition, revised and enlarged. Pp. 225. Cloth, price $1.50. W. M. Leonard, Boston, 1916.

Standards of Health Insurance. By I. M. Rubinow, M. D., Ph. D., Executive Secretary Social Insurance Committee, American Medical Association; Author "Social Insurance," "Standard Accident Table," etc.; Lecturer on Social Insurance, N. Y. School of Philanthropy, 1912-1915; President Casualty Actuarial and Statistical Society of America. Pp. 322. Cloth, price $1.50. Henry Holt & Company, New York, 1916.

Social Diagnosis. By Mary E. Richmond, Director Charity Organization Department Russell Sage Foundation, Author of "The Good Neighbor," etc. Pp. 511. Cloth, price $2.50. Russell Sage Foundation, New York, 1917.

English-Italian Phrase Book for Social Workers. A Phrase Book for the Use of Social Workers, Teachers, Physicians, and Nurses. By Edith Waller. Pp. 178. Paper, price $0.75. Edith Waller, Morristown, N. J., 1916.

English-Italian Phrase Book for Social Workers, Physicians' Supplement. By Edith Waller. Pp. 19. Paper, price $0.25. Edith Waller, Morristown, N. J., 1916.

A System for Case-Taking, With Explanatory Notes. By George William Ross, M. A., M. B. Tor., M. R. C. P. Lond. Demonstrator in Clinical Medicine, University of Toronto Assistant Physician, Toronto General Hospital; and Julian Loudon, B. A., M. B. Tor., M. R. C. S. Eng., L. R. C. P. Lond., Assistant in Clinical Medicine, University of Toronto, Assistant Physician, St. Michael's Hospital, Toronto. Pp. 69. Flexible cloth, price $0.50. The Macmillan Company of Canada, Ltd., Toronto, 1916.

QUERIES AND ANSWERS

Cut-and-Dried Hospital Plans

To the Editor of THE MODERN HOSPITAL:

We shall be grateful if you will send us sample plans for a fifty-bed hospital; we are planning a new building to take the place of our old one and would like to look over several plans. A WESTERN HOSPITAL.

We are more than glad to send you plans of several fifty-bed hospitals, and are doing so, but we warn you against too great a reliance on any such samples. The wise way for you to proceed is to employ an architect who has had experience in the building of small hospitals and be guided by his judgment. Conditions are not the same in any two localities and the problem differs with every new institution. What would seem an excellent hospital in one place, and for one set of conditions, would be impossible for another. It seems to us the best way is to employ an architect of known experience and skill and honesty and submit your problem to him. If he runs across conditions upon which he needs the advice of a hospital consultant, he will know where to find such advice, and it is the business of your board to pay for such advice when asked for by your architect.

Waste-Paper Profits

To the Editor of THE MODERN HOSPITAL:

Will you kindly give me information regarding profits in baled paper? What paper-balers on the market make for greater and more profitable results? Does the section of the country determine market value of the above product? Any information along this line will be greatly appreciated. A MONTANA HOSPITAL.

That part of your question in which you ask whether the section of the country makes any difference in the value of waste paper is the keynote of the whole thing. Baled waste paper sells, in the Chicago market, at $10 per ton. The freight rate from Montana to Chicago on that class of goods is approximately $10 per ton. If you sold to Kansas City you would have a shorter haul and a lower freight rate, but you would also get a lower price, and the same would be true of any other market in which you sold.

Hospitals that are near a large market where the freight rate is very low could afford to bale their paper, but you cannot afford to bale yours. There are a number of paper-balers on the market. Albert Pick & Co. of Chicago have a very good one that the hospitals buy; also the Ypsilanti Hay Press Co. of Ypsilanti, Mich., and Birmingham & Seaman of Chicago.

Salary of Pathologist

To the Editor of THE MODERN HOSPITAL:

What salary do you think should be paid for a full-time pathologist and bacteriologist in a western Canadian hospital of 180 beds? Pathologist is to be a thoroughly competent man and fully qualified by at least two or three years' experience in the work. Although we desire from the first a man who is competent to give an opinion of value, yet we expect the position to become more remunerative as the department is developed.

Thanking you for your valued advice,

A WESTERN CANADIAN HOSPITAL.

You can probably obtain the services of a young and very excellent pathologist and bacteriologist thoroughly trained in a good school, but without very much experience as director in an institution like yours, for $1,500 or $2,000 a year, and if you want such a man the best way for you to proceed would be to apply to Dr. W. T. Councilman of Harvard, Dr. William H. Welch of Johns Hopkins, Dr. Ludwig Hektoen of Rush Medical School, Chicago, Dr. Simon Flexner of the Rockefeller Institute, or Dr. Adami of McGill University, Montreal, all of whom are constantly bringing out young men of fine training.

We think that if we were in your place, however, we would prefer to pay $3,000 or $4,000 to start with and get a man of considerable clinical experience, who would at once impress himself on your physicians to an extent that would encourage them to go to him with their problems and seek his advice. We are quite sure that the patronage to your hospital would be so much greater, if you had such a man as we are thinking about, that his salary would be a negligible item.

It is certain that you will not be able to obtain the services of such a man for less than $5,000 or $6,000, as a permanent proposition; but you very greatly need just such a man in your community, and his influence would spread all over western and central Canada.

No Vacations This Year?

To the Editor of THE MODERN HOSPITAL:

Our trustees, some of them, are beginning to talk about not giving vacations this year to the people in the hospital, on the ground that expenses everywhere are so high that the hospital cannot afford to hire substitutes for those on vacation; they argue that we all ought to be willing to do our "bit" by staying on the job.

I greatly fear that we are going to suffer for such a short-sighted policy, but what can one do?

A NEW ENGLAND HOSPITAL.

Enthusiasm for the war and patriotism and foresightedness are all admirable qualities, but sanity and horse sense are also worth something. Your trustees are undoubtedly afflicted with the same sort of hysteria that seems to be epidemic all over the country. It is not going to get us anything to allow ourselves to grow excited, and, if this is to be a long war, with huge burdens and many sacrifices, we had better get into training for it by the practice of the sanest sort of common sense. The very fact that hospital superintendents are being compelled to practice administrative economies greater than ever before means already an extra burden of work, and if that superintendent and the department heads under him or her are to measure up to the necessities of the hour, they must be in good mental condition to do so. One cannot do one's best when tired out and stale. It would be far wiser for your board of trustees to lengthen the vacation this year than to cut it out. The latter is a short-sighted and very unwise thing to do, and the hospital will pay for it in the quality of work done if your board persists in its determination.

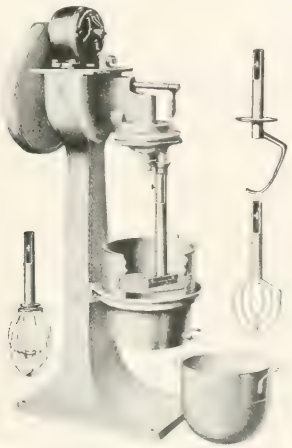
Miss Nina A. Smith, for the last two years superintendent of nurses at the Mary Fletcher Hospital, Burlington, Vt., has resigned this position to take up work on hospital administration at the summer session of Columbia University.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

A New Kitchen Machine

At a time like the present, when there is a great scarcity of competent help in every line of endeavor, labor-saving machines will be more in demand than ever, not only in manufacturing establishments, but also in public institutions and hospitals. Many of the larger institutions have long ago learned to appreciate the value of such labor-saving devices in their laundry departments and in the kitchens, but to the smaller institutions the cost of some of these machines seemed to be out of proportion to the value that might be derived from the use of them. Recently, however, the Read Machinery Company has put on the market a machine under the name of the "Read Jr.



A kitchen machine for mixing, beating, creaming, or whipping material with a double-motion beater.

Three-Speed Kitchen Machine," and the cost of this apparatus seems to be within the reach of the smaller institutions. The machine is operated by a quarter-horse-power motor, direct drive, mounted at the head of the machine. It can be operated by simply attaching the plug to any electric light socket. This is a very important point, as considerable expense is saved in wiring. The machine has three speeds, which can be changed without stopping the motor, and the accessibility of the starting, stopping, and speed-changing handle is an important point in the saving of time and labor. The manufacturers state that the machine will mix, beat, cream, or whip any batch of material in one-third or less time than what is required by hand labor, and will do it better in every case.

The motion of the beater is known as a planetary one in that, while it revolves around in the circumference of a 15-quart bowl, it also has a double motion, turning on its own axis, rapidly spinning while it moves. This feature seems to be the most efficient part of the machine in that the double motion of the whirling beaters effectively whips the entire contents of the bowl. The bowls and beaters are interchangeable, and the machine is guaranteed to be practically nonbreakable, and, with average attention as to cleaning and oiling, its life should be unlimited.

Parresine—A Dressing for Burns, and Method of Its Scientific Application

In former issues of this journal we called the attention of the readers of this department to the fact that not all men of genius are at work devising new engines of destruction, as a result of the terrible war that is raging in Europe, but that many new apparatus and devices have been invented to aid the men who have lost some parts of their bodies, such as arms, legs, and even an ear or the nose. In the former instances the patients are fitted with

Fig. 1. Burn being dressed with Parresine.

cleverly constructed artificial arms or legs which will help them to follow their calling again or take up some other line of work that will make them partly, if not entirely, self-sustaining. In the latter instances, where such a member as an ear or the nose has been lost, the purpose is to supply these men with an artificial substitute so that they may again mingle with their fellow men without feeling themselves to be a disagreeable sight and an object of pity.

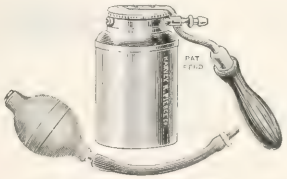


Fig. 2. Parresine atomizer.

In the field of medicine and surgery there have been many innovations, but the two which have attracted the most attention are Carrel's method of wound sterilization by means of Dakin's hypochlorite solution and Dakin's improved new chlorine-carrying antiseptic (put on the market in this country under the trade name of "Chlorazene") and

a paraffin dressing for burns as applied in the French war hospitals. Paraffin mixed with various other ingredients, used either as a poultice for rheumatism or neuritis or a covering for burns, is by no means a new treatment and it is stated that a French surgeon, Dr. Barthe de Sandfort, first reported the method about ten years ago, but there never was such an extensive opportunity for its use as during the present war in Europe. From various sources we learn that very satisfactory results have been obtained in cases of burns, whenever this dressing has been carefully and scientifically applied.

Under the trade name of "Parresine" the Abbott Laboratories of Chicago have put on the market a wax-like substance containing approximately 95 percent of paraffin,

Fig. 3. Application of Parresine dressing with an atomizer.

2 percent eucalyptol, treated by the addition of a vegetable wax and a mineral and a vegetable resin to modify its physical character, especially as regards plasticity, pliability, and adhesiveness.

Parresine, when heated, begins to melt at a temperature of 114° to 117° F., becoming completely liquid at 120° F. It is marketed in cakes weighing approximately from 1 to 2 pounds each.

The preparation is used only in the hot liquid state. While it is sterile itself when melted, the usual care should be taken to prevent bacterial or other contamination. The ordinary "double boiler" serves the purpose of heating admirably when a more elaborate apparatus, such as the Parresine atomizer (Fig. 2), is not available.

Fig. 4. Properly applied Parresine dressing.

It is pointed out by surgeons who have made extensive use of this method that, while the wound should be clean, it should never be rubbed, but should be treated throughout as tenderly as possible, so as not to disturb or injure any particle of epidermis which may become a nucleus for the development of new skin. If the burn is a fresh one, simply flooding it with a weak solution (0.125 to 0.25 percent) of Chlorazene (Dakin's solution) is sufficient.

In seriously infected burns, after flooding with Chlorazene and drying, it is desirable to apply with an atomizer, prior to using Parresine, a spray of Dakin's new oil-soluble antiseptic, recently described in the *Journal of the American Medical Association* under the name Dichloramine—T. This is dissolved in chlorinated eucalyptol, and diluted to a strength of 2 to 5 percent with chlorinated paraffin oil. This antiseptic can be used in a concentration twenty to forty times as great as Dakin's hypochlorite solution, and its antiseptic action is continuous. Dichloramine—T and chlorinated eucalyptol and chlorinated paraffin oil (the two latter made up according to Dakin's formulas) are likewise supplied by the Abbott Laboratories.

Before applying the Parresine dressing and thin layers of absorbent cotton, the injured part should be rendered perfectly dry. This can most easily and quickly be accomplished with the aid of an electric hot-air hair drier, but where such an apparatus is not available the physician may dry the wound surface by gentle applications of hot folds of sterile gauze, followed by fanning with a clean towel or fan.

The liquid preparation should be applied at the temperature of from 130° to 140° F., and an apparatus such as is shown under Fig. 3 is very satisfactory for the purpose; where this is not available, however, it may be applied with a fine varnish brush from 1 to 2 inches in width.

Fig. 4 shows a properly applied Parresine dressing.

The R. U. V. Ultra-Violet Sterilizer

The problem of sterile water for the operating room is one which for years has been giving designers of hospital equipment much opportunity for improvement. The method most employed is, of course, boiling, but there are objections, especially in warm weather, against using more heat in the sterilizing or operating room than is absolutely necessary. The subject of sterilized filtered drinking water in hospitals is one which has not had the attention it deserves. It would seem that pure drinking water surely should be of first consideration when it is recalled that the average "pure" water from wells, springs, etc., is polluted with disease-bearing bacteria.

Absolute sterilization of water may be quickly and cheaply accomplished by means of the ultra-violet ray sterilizer now being commercially produced. The sterilizer consists essentially of a container through which the water is passed, being connected up with existing water-pipe lines, and a special type of lamp which generates ultra-violet rays. Scientists have known for many years that sunlight has the power of partially sterilizing water, and that some of its invisible rays form the active agent in this work. These rays were segregated, measured and named "ultra-violet," since they occur beyond the visible violet rays in the spectrum. Research on these rays developed many interesting facts, among them being their great value as a bacteria destroyer. Eminent men toiled for years to construct an economical and practical method of producing ultra-violet rays and applying them to the great work of sterilization. Their efforts developed the quartz mercury vapor arc lamp and the ultra-violet ray sterilizer. Ultra-violet ray sterilizers approach this ideal condition to an admirable extent. Roughly, they are classified into two groups—the E or pressure type and the B or open type. The actual installation of either type consists of piping the water supply to the sterilizer, carrying from it the service line, providing a drain connection, and connecting up with electric current wires. Starting and stopping both the flow of water and electric current at the sterilizer is thereafter automatic in types of apparatus in which this feature is desired, controlled by opening or closing the electric current switch. For the information of those technically inclined, the lamp is tilted automatically as well.

Sterilizers of both types are fitted with quartz tubes, which are inserted into the body of the sterilizers and around which the water is caused to flow at a predeter-

mined velocity, and in a film of fixed depth. Inside these quartz tubes are placed the mercury vapor arc lamps. Ultra-violet rays projected by the lamps strike and penetrate the water in a scientifically correct manner, and are afforded proper opportunity to annihilate the bacterial content. Sterilization, it is seen, is thereby obtained without use of heat or chemicals, and the resultant sterile water in nowise differs from the original raw water except in sterility; the taste, temperature, color, mineral content, and all physical and mineral properties remain as before treatment.

The exact phenomenon of the bacteria destruction is not known. The contention of modern scientists, however, that the ultra-violet rays first produce a coagulation of the protoplasm, which results finally in an entire disappearance of the body of the germ, is, to all practical purposes, correct. Conscientious, exhaustive tests have proved decisively that the bacteria are killed, that they are not stunned with possibility of future recovery, and that this bactericidal action is due to the ultra-violet rays, and not through the medium of oxidation by chemicals formed by contact of the rays with the water, or by any other indirect means. The temperature of the water exercises no influence over this work, since the same bactericidal action is found when clear ice is subjected to ultra-violet rays as when water at any temperature is exposed.

Genitourinary Table

A urological table, suggested by Dr. Wm. Braasch, Rochester, Minn., on the gradual development of which a great deal of time and thought has been expended, is shown in the accompanying illustrations. The seat of this new genitourinary table is made of steel and porcelain enameled. It is slightly concaved and hollowed out in front; the shape of the seat and the raised rim assure proper drainage. The drain pan under the seat is made of

Fig. 1. Genitourinary table.

noncorrosive metal, and, working on slides, can be brought forward during irrigation or can be pushed back entirely out of the operator's way when not in use. The seat can be readily raised or lowered to suit the convenience of the operator by means of a hand wheel and ratchet while the patient is on the table. The back and front drop leaves are of steel and porcelain enameled, and the front drop leaf can be removed when not required. The range of adjustment and the ease with which the adjustment can be made seem to make this an ideal table for the use of the genitourinary surgeon, especially in his cystoscopic work.

The knee crutches are a modified form of the Bierhoff type. Shoulder crutches are also provided, and can be removed from the table when not in use. A footstool is a

Fig. 2. Genitourinary table.

part of the table, and can, after the patient is in position upon the table, be dropped out of the way. The frame of the table is made of steel tubing and finished in white enamel, while all working parts are nickel-plated. The table is mounted on four large rubber-tired casters, two of which are provided with a locking device to prevent it from moving.

Only two of the positions obtainable are illustrated. It is a fact, however, that all positions useful in urological work can be secured, and the table is serviceable as well for gynecological and general office work.

New Instruments for Testing Acidity and the Presence of Albumin in the Urine

The urine acidometer illustrated here (Fig. 1) has been devised by the manufacturers of the well-known Tycos products.

The instrument is graduated to read directly the percentage of acidity (decinormal sodium hydroxid reaction). It is marked at 5 c.c., 10 c.c., and above to 100 percent in 2 percent divisions. There is a strip of white glass on the back of the tube to enable a high degree of accuracy in reading.

The directions for making test for acidity are given as follows: Fill the tube with urine to the 10 c.c. mark and add two drops of a 1-percent aqueous solution of phenolphthalein. Close the tube with the thumb and invert several times to mix the contents. Now add decinormal sodium hydroxid solution, drop by drop, inverting the tube after each addition, until the color has changed to a light rose pink. This marks the end reaction. The percentage of acidity is now read off the tube at the level of the fluid.

In concentrated urine, where the acidity is above 100 percent, the tube should be filled to the 5 c.c. mark with urine, and water to the 10 c.c. level. When such dilution is made the reading is, of course, doubled.

The average acidity of a mixed twenty-four-hour specimen of urine is between 30 and 40 percent.

To determine the total acidity, multiply the percentage of acidity of a mixed twenty-four-hour specimen by the number of cubic centimeters voided; for example, acidity, 30 percent; amount voided in twenty-four hours, 1,500 c.c.; total acidity equals 30×1,500 or 45,000 percent.

Fig. 2 illustrates the Pfeiffer Albuminometer. Pfeiffer's method of determining albumin in urin is considered very reliable for comparative clinical work. The Tycos improved form of this albuminometer is cone-shaped at the bottom, thus enabling a quick and accurate reading of

Fig. 1. Urine acidometer.

Fig. 2. Pfeiffer albuminometer.

small quantities of precipitate. The tube is accurately graduated as follows: To 3 c.c. in 0.1 c.c.; 3 to 5 c.c. in 0.2 c.c.

The directions given for making tests for albumin with this instrument are as follows:

The following reagent (Tsuchiya's) should be kept in stock:

Phosphotungstic acid	5 percent
Hydrochloric acid, Con.	5 percent
Alcohol	95 percent

Place 10 c.c. of urine in a tube and add 10 c.c. of the reagent. Stopper the tube and invert it several times, then stand aside twenty-four hours at room temperature. Read off the precipitate and from the following table of equivalents calculate the parts of albumin in each liter of urine.

Table as given by Pfeiffer is as follows:

0.5 c.c.	1.00 parts per mille.	1.8 c.c.	2.80 parts per mille.
1.0 c.c.	1.50 parts per mille.	2.0 c.c.	3.20 parts per mille.
1.2 c.c.	1.75 parts per mille.	2.2 c.c.	3.60 parts per mille.
1.4 c.c.	2.00 parts per mille.	2.4 c.c.	4.00 parts per mille.
1.6 c.c.	2.40 parts per mille.		

Sterilized Hot Water From Cold-Water Pipes

Under the trade name of the Geyser Electric Water Heater there has recently been put on the market an apparatus which, according to the manufacturers, will produce hot and cold water instantly from the same faucet and, what is more, will sterilize the water from the cold-water pipes. This apparatus is said to make it possible to secure, without coal or gas, at any time, a supply of sterilized hot water or cold water by simply turning an ordinary faucet handle.

This feature should make this apparatus especially useful in the operating and dressing rooms of small institutions which may not have been originally built for hospital purposes, as well as for surgeons' and dentists' offices, laboratories, and bath rooms.

The "Geyser" heater is made to fit various conditions and in several degrees of capacity. It has a compact form,

Geyser electric water heater for securing sterilized hot water from cold-water pipes.

is neat in appearance and can be fitted to any ordinary supply pipe. There is but one faucet and when this is turned to the right cold water flows from the spigot. When it is turned to the left, the electric current is turned on and the hot water flows.

The manufacturers guarantee that this electric water heater is perfectly insulated and that the construction is such that there can be no danger of electric shock or fire from short-circuiting.

The Department of Public Charities of New York City, is having plans prepared for a complete new plant for the Cumberland Street Hospital in Brooklyn, which it is said will be the most up-to-date institution in that city, both in its architecture and arrangement and in the way of new and improved facilities for the care of patients. The entire plant, including heating, food service, ward service, help, nurses, and staff quarters, will be under one large terraced roof with Solaria and open porches for open-air cases and convalescents. The hospital is to be arranged so that neither the bringing in of patients nor the removal of bodies will be within view of either the patients or the public. The arrangement of beds in the wards will be unusual. There are to be twenty-four beds in each ward, divided into six groups, with clear plate glass between, permitting an unobstructed vision of the entire ward. Small laboratories will be fitted up on each floor, adjacent to the operating rooms. Food and dishes will be sent on heated trucks direct from the kitchen to the patients' beds. The hospital will have a capacity of 312 beds.

HINTS FOR HOSPITAL SUPERINTENDENTS.

Canning in the Hospital

Now that we are talking about economies, especially in the food department, why not think about doing a little canning in the hospital? Generally the hospital steward or buyer has access to the best markets and the best prices in the markets, and generally he or she has some individual on the market who would be glad to give him or her a hint when some specially good bargain comes along. For instance, there may be a glut of strawberries on Saturday. These strawberries will not keep over Sunday and the market would be off Monday even if they did keep. The dealer would like to get rid of them and would make a substantial sacrifice in the price. Who could handle such a matter better than a hospital? With the right sort of inspiration a good many convalescent patients would regard it as a great treat to be permitted to help stem strawberries, and the dining-room help would be more than glad to jump in and help in an emergency.

Working in this way and taking advantage of the markets somewhat after this fashion, hospitals ought to be able to put up an immense amount of preserves, jellies, and perhaps some canned vegetables, most economically. If there is a good cook or dietitian in the institution the quality of the preserves or canned articles will be better than can be bought from regular dealers.

Already many sanitariums, state hospitals, county farms, and hospitals having country branches are putting up vast quantities of fruit and vegetables. Some of them are even going to the extent of canning some of the things to sell where there is a superabundance on hand.

Dainty, Skillful Carving as a Hospital Economy

The prices of meats have gone up approximately 25 percent in the last year and in many cases 50 percent. We have a story this month from Dr. Frederic Brush's institution, the Burke Foundation, in which the patients are compelled to do with less meat than they have been accustomed to and the doctors are finding that the patients do as well, or even better. Many of us will reply to this hint that "our patients will not be dictated to and they will send back if we do not send them enough the first time, and they will raise a row, if they can, for all the meat they want."

There is an old saying among food caterers that "American people eat most with their eyes." This is no doubt eminently true; in other words, imagination has a great deal to do with our appetites. If we see on our plate a slice of meat almost covering the plate, and if the slice looks appetizing and is nicely served and garnished, we are very much disposed to accept what we see for the face value of that slice of meat and we are very unlikely to look underneath or to turn it over to investigate its thickness.

The hint here is that if our roasts are daintily carved, with a very sharp knife, and if they are served with a garnish of some sort, or perhaps a small amount of juice or gravy, about half the amount will suffice.

Investment of Earnings

What do hospital superintendents and department heads in hospitals do with their earnings? This thought comes to us because recently we learned of a splendid head nurse in one of our hospitals who had saved two or three thousand dollars and who had been victimized out of the whole amount in some scheme of high finance.

To the world of crooks professional people generally are known to be easy marks or "suckers." The medical profession has generally been accredited with the post of honor in the army of suckers and we are wondering whether their laurels are not in danger at the hands of hospital administrators and department heads.

The reason why professional people are not good business managers is because their thoughts are devoted to other things and because they have not taken the time or spent the energy or acquired the experience to learn business methods and business customs and to evaluate business enterprises. Fortunately the hospital superintendent and department head has usually a board of directors, made up of the sanest and most successful business men in the community, and there is nearly always one or more board members who would be more than pleased to advise hospital people as to the investment of their funds. If we are sick we go to a doctor, if we need shoes we go to a shoe house; then why, when we are dealing in finance, do we not go to someone who is supposed to know something about finances?

Laundry Soap as a Substitute for Scrubbing Soaps

In these days when potash soaps are pretty nearly a negligible quantity it is necessary for hospitals to do some substituting. Our scrub people use entirely too much soap everywhere and all the time. A good way to supply scrubbing soaps and soaps for the general use of the janitor service is to use the laundry soap from the regular chips. Take the boiled soap that has been allowed to cool and solidify and give it to the janitors and scrub people in very small quantities. Housekeepers will find it by far the cheapest way; the laundry soap is a very excellent substitute for the potash or so-called green oil soaps.

Demand Good Recommendations

Now that thousands of young men are being taken out of civil life, the wages of those who are left behind are going to increase and the hospitals are going to find themselves under the necessity to get along with a poorer quality of domestic help or a small number or to pay higher wages; the one sure thing is that a less competent class of people are going to offer themselves for hospital places, and, in our anxiety to get people, we are liable to make costly mistakes. We ought in every case of an applicant for employment to insist on good recommendations from the right sort of people, and we ought to go behind these recommendations in every case and communicate with the person whose name is being used as a recommendation and find out all about the applicant. It is a very vicious habit with hospital people to give undeserved recommendations. Many superintendents will dismiss a man or woman for the very best of reasons and then give him or her a recommendation—which is not a fair thing to other people who may be asked to employ them. Not long ago a well-known hospital administrator dismissed one of the domestic help for petty thieving. He ought to have prosecuted the person, but instead of that he went to the other extreme and gave the man a letter of recommendation which served to obtain employment for him in a nearby hospital.

We ought to be very careful about bestowing recommendations and we ought to demand exceptional recommendations even of the cheaper down-stairs help.

LIGHT AND ITS EFFECT ON HEALTH

The Lighting Problem in Hospitals—Brilliancy of Modern Artificial Illuminants Dangerous

When we consider that the human eye became adapted to a brightness not exceeding 8 candle power per square inch from exposed light sources for centuries, and that today it is subjected to brightness far in excess of 3,000 candle power per square inch from illuminants with concentrated filaments and gas-filled bulbs, the prosperity of oculists and the predominance of tinted eye-glasses ceases to be a mystery.

The human eye has been shaped by use. In early days a wick of hide soaked in oil or tallow gave the light by which work was performed at night, and since then, for hundreds of years, the human eye has been accustomed to a certain brilliancy of low degree and yellow color. This period covers the advent of the oil lamp, candle, gas flame, and first electrical lamp. Then came an abrupt and tremendous change with the development of the tungsten metallic filament. Although the first electric lamps were more brilliant than the candle, oil lamp, or gas flame, still the color was yellow, the same to which the eye had been accustomed for centuries, and hence the increase in brightness was mitigated to some extent. With the advent of the tungsten lamp, the eye was exposed to an intrinsic brilliancy of over 1,000 candle power per square inch, or two hundred times greater than it had ever been accustomed to since the world began, and since then the brilliancy of these eye-destroying illuminants has even further increased.

The retina is most accustomed to light rays which enter the eye in a horizontal direction, as from windows. One may regard a candle on a level with the eye without discomfort, but, when the candle is raised a few feet above the head or placed upon the floor, a very uncomfortable ocular sensation is apparent. The same discomfort is noticed when a man changes from a straw hat to a derby with its narrower rim, or again, when light is reflected acutely from a snow-covered pavement into the eye. In all these instances, the light enters the eye at an unusual angle and excites sections of the retina unaccustomed by usage to such stimuli. The eyebrow as a protection from this source of eye trouble is exactly similar in action to the straw hat brim. If the candle is raised above the head to such a point that no direct rays enter the eye, owing to the interception of the eyebrow, an immediate and grateful sensation of relief results, even with the mild and inoffensive candle. The experiment mentioned, slightly modified, affords an excellent method of instantly determining whether the lighting of any room is physiologic. Place the hand like a visor above the eyes and from beneath look straight across the room. Then remove the hand. If the directional effect described prevails, an intense relief will be immediately felt when the hand is replaced.

The light source which is non-injurious is one which can be regarded without squinting or brow puckering. We can look at a candle, an oil lamp, or a gas flame without ocular discomfort because of their low brilliancy and yellow color.

There is no best or universally applicable system of lighting. Every lighting problem requires special treatment, meeting the local and special requirements.

To eliminate glare, no bare, glaring globes should be used in the visual field.

Under the direct system of lighting, the usual fixture employed consists of a long vertical stem with horizontal arms, at the ends of which are fitted pendant or upright gas or electric lamps. If such fixtures are hung high with bare lamps, the utilization of light from the side of the lamp is horizontal and much of it is ineffective and wasted. If the fixtures are hung low, the exposed bulbs are directly in the visual field and the resultant glare so intense that nothing can be seen instinctly.

One ready method of correcting such lighting of a room consists in extending the length of fixture stem slightly and placing below the lamp an inverted opal glass reflector of such density that at least 80 percent of the light generated by the lamp is directed upon the ceiling, and the remainder, less the loss caused by the absorption of the glass, is transmitted below to the working plane, giving an adaptation of what is known as semi-indirect lighting.

From this type of lighting the same directional annoyance can result as from direct lighting, if the redirecting mediums are placed so that their rays strike the ceiling with a wide angle of deflection. To avoid this it is necessary to design the reflector so that the light is reflected directly to the ceiling and returns without striking the side walls.

Under the indirect system the physiological factor depends on the shape and hanging of the reflector. The absence of a visible source of light is unquestionably unnatural, but this system can be modified without losing its efficiency, so that a secondary shell of glass becomes luminous, conveying, or rather, counterfeiting the suggestion of a visible source. When the sun is obscured daylight does not seem unnatural. Daylight also is white light, which the tungsten most nearly approaches. Yellow light has a preponderance of red rays, which inflame the eye. The advantage of the semi-indirect system lies in its efficient utilization of the flux directed upon the ceiling, but its great disadvantage is the unnatural brightness which it imparts to the upper area of the room, leaving a stratum of appreciably less brightness below. This defect is eliminated in the semi-indirect system, which restores the balance of illumination between the upper and lower strata.

Many eye troubles attributed to other causes are due to glaring lights, and, strange to relate, indirect lighting which hides the lamp from view is just as bad for the eyes as exposed bulbs unless designed and installed with the greatest scientific precision and esthetic care. This same objection applies to semi-indirect lighting where the exterior portion of the fixture is luminous.

In the lighting of hospitals many reforms are necessary. The dangerous brilliancy of some lamps has made the lighting of hospital wards a matter of deep study. In the operating room, too, it is possible to use these glare-producing illuminants in such a way as to obtain the maximum effect with the least expense. Those who are building should bear in mind that important changes now taking place in the development of illuminants will be in evidence within the next five years and will render obsolete and worthless all lighting equipment which has not been specially designed to meet these changes. With a system designed by a lighting specialist, the efficiency, economy, and utility of the system will remain constant.—Beverly S. King and Associates (F. L. Godinez, lighting specialist).

Miss Delphine Hines, R. N., has lately assumed the duties of superintendent of the nurses' training school at the Trinity Hospital, in Milwaukee. Miss Hines is a graduate of St. Mary's Hospital, Rochester, Minn., and has done post-graduate work in the University of Minnesota Hospital, Minneapolis, and Mount Sinai Hospital, New York City.

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. IX *September, 1917* No. 3

THE HERMAN KNAPP MEMORIAL EYE HOSPITAL, NEW YORK CITY

Hospital and Dispensary Service Exclusively for Ophthalmic Cases—Complete and Extensive Equipment for Therapy and Research—Ward Beds Arranged for Use in Operating

By ARNOLD KNAPP, M. D., Executive Surgeon of the Hospital, New York

THE Herman Knapp Memorial Eye Hospital is an outgrowth of the New York Ophthalmic and Aural Institute, which was established in East Twelfth Street, New York City, in 1869. The hospital was founded through the efforts of the late Dr. Herman Knapp, who was its executive surgeon for forty years.

When a change in the character of the district in which the original hospital was located made it necessary to remove to another district, the trustees decided upon a site farther uptown and at the same time changed the name of the hospital so that it might be a memorial to Dr. Knapp and a recognition of his distinguished service in the field of ophthalmology generally, and particularly in this hospital. The new hospital is in the vicinity of Roosevelt Hospital, the Sloane Hospital for Women, Vanderbilt Clinic, and other hospitals, and is conveniently located for the class of people treated in the dispensary.

Fig. 1. The Herman Knapp Memorial Eye Hospital, New York, an institution which receives both out-patients and in-patients for the treatment of ophthalmic diseases exclusively.

The hospital treats eye cases exclusively and has a very large dispensary service, the number of new out-patients treated in 1916 having been 7,625, and, since the founding of the hospital, 439,709 dispensary patients in all cases treated gratuitously, and charged no registration fee. The medicines are dispensed at a really nominal price; eyeglasses are sold at wholesale rates to those patients who can afford to pay something for them, and are given to those who are too poor to pay anything.

The work of the hospital also includes a school of ophthalmology for postgraduate courses in this science, and scientific research is also conducted, the results of which are published in the medical press, chiefly in the *Archives of Ophthalmology*.

The new building of the hospital is at the southwest corner of Fifty-seventh Street and Tenth Avenue, each of these streets being 100 feet wide, so that excellent light is afforded to all stories of the hospital. The building is seven

stories high, with well-arranged basement and sub-basement.

The sub-basement is given up to the mechanical plant—heating boilers, coal storage, pumps, water heater, and other apparatus.

The basement is occupied by the general service department, the kitchen, refrigerator room, servants' dining room, laundry, carpenter's shop, and general store rooms being in this story. Adjoining the service entrance there is a receiving room for

Fig. 2. One of the general wards in the Herman Knapp Hospital.

Fig. 3. Main operating room on seventh floor of Herman Knapp Eye Hospital.

the storage of supplies in bulk, and from this room supplies are issued to the various departments.

The first story is entered from both fronts, the north entrance being used by hospital patients and the east entrance by clinic patients. The offices and a reception room adjoin the hospital or in-patients' entrance. The southerly part of the first floor contains a large waiting room. The patients are entered in the registry book in this room, and receive their clinic cards. The memorial tablet to the founder of the hospital is placed on the south wall of this waiting room. In addition to patients' toilets, there are rooms for the optician and the druggist, and also rooms for the attending surgeons.

The second floor contains a small waiting room, an examining room, a refraction room, and a small operating room, all of which are used by the clinic. There are dark rooms adjoining the examining room and refraction room. In the second story there is also a class room, with its separate dark room. Provision is made in the class room for a projecting apparatus for use in instruction. There is in each of the large rooms a tap and drain, so that the floors can be flushed. The rooms are all unusually well lighted by having windows which run clear to the ceiling, so that artificial light is not required.

The third and fourth floors are ward floors. The floors are divided into rooms which contain from three to six beds each. This enables the separation of the patients in rooms for oper-

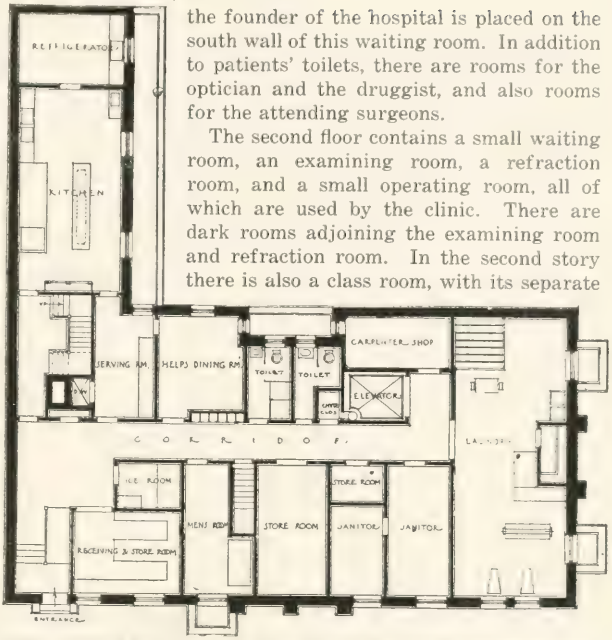


Fig. 4. Basement floor of the Herman Knapp Hospital, devoted to the service department.

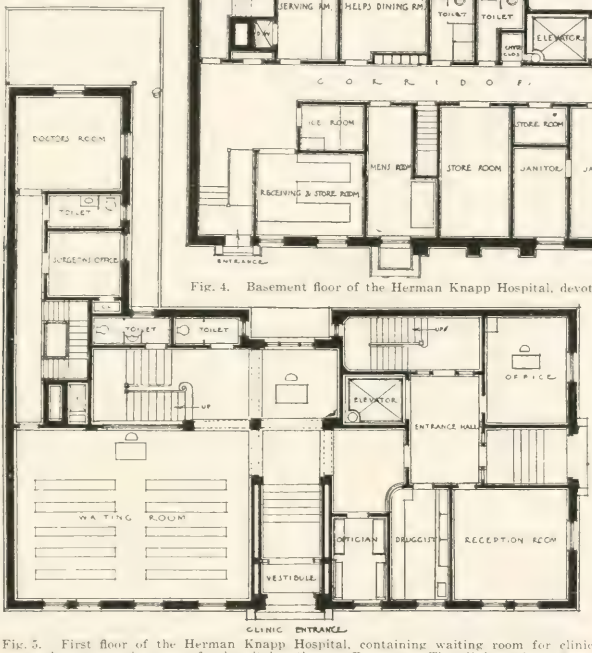


Fig. 5. First floor of the Herman Knapp Hospital, containing waiting room for clinic patients, reception room for hospital patients, offices, etc. The clinic patients enter on the Tenth avenue side and the hospital patients on the Fifty-seventh street side.

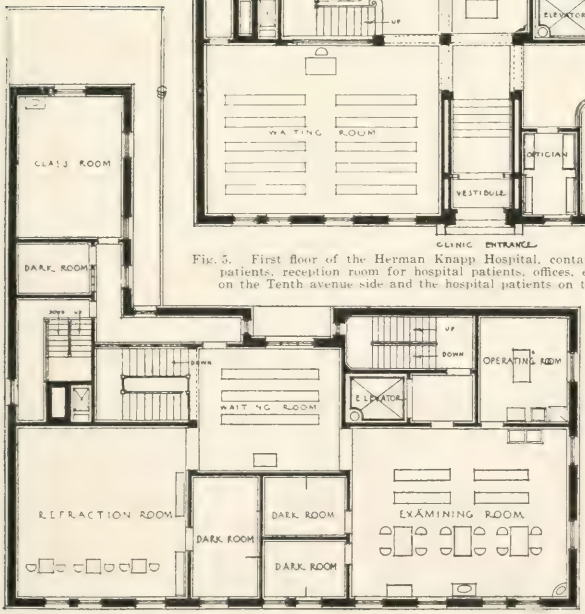


Fig. 6. Second floor of the Herman Knapp Hospital, containing waiting room, examining room, refraction room, and operating room for clinic patients, together with class room and dark rooms

ative cases, rooms for treatment cases, and rooms for those with external diseases. The beds are so arranged that they can be used for operating, as the cataract patients are all operated on in their beds. This is made possible by having the beds of a proper height, each with a detachable head. The light in these rooms, on account of the high windows running clear to the ceiling, is excellent. In addition, there is an electric outlet at the foot of each bed for artificial light. There is running water in each one of these rooms. Ventilation is obtained by the use of the transoms. The artificial light is indirect by means of reflectors. Each floor has, in addition to toilet and bathrooms, a diet kitchen and a day room, as well as a room with guarded windows for delirious cases, which also can be used for contagious cases.

The third floor is used for men and the fourth floor for women and children. In the third and fourth floors there are rooms for the house physicians, each

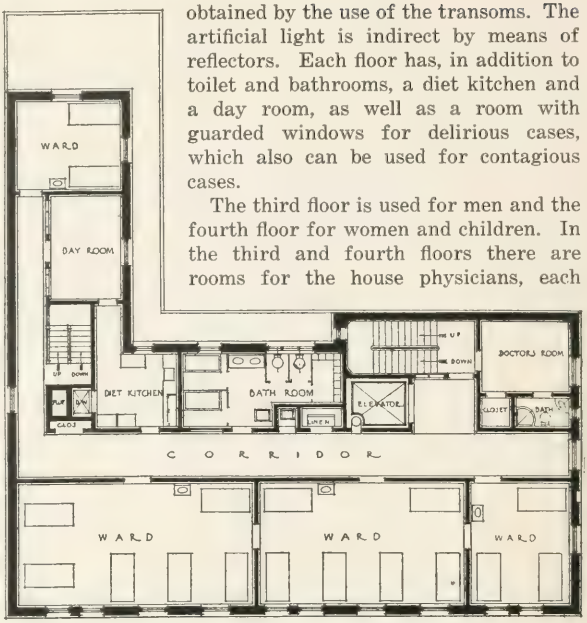


Fig. 7. Ward floors (third and fourth) of the Knapp Hospital. The third floor is for men patients and the fourth for women and children.

Fig. 8. Private patients' floor (fifth) in the Herman Knapp Hospital.

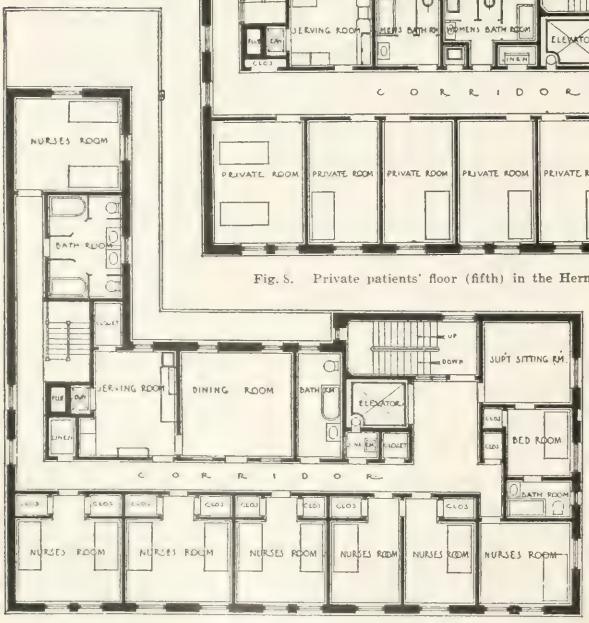


Fig. 9. Nurses' quarters (sixth floor) of the Herman Knapp Hospital.

room having a private bathroom. The fifth floor is used as private patients' rooms, bathrooms, and diet kitchen.

The sixth floor is used by nurses, and, in addition to the nurses' bedrooms, has a nurses' dining room, serving room, and sitting room, and a suite for the superintendent of the hospital.

The northern half of the seventh floor is occupied by the operating rooms, one large room with side light for operations in daylight and another for operations with artificial light (originally planned as an etherizing room and so

designated in Fig. 10). The giant magnet is situated in this room. Adjoining the large room is a room for the sterilization and preparation of dressings. A pathological laboratory and a photographic dark room are on this floor. The southern portion of the seventh story is given up to servant's bedrooms.

The entire roof is available for the use of patients, as it is brick-paved and is surrounded by a high wrought-iron fence.

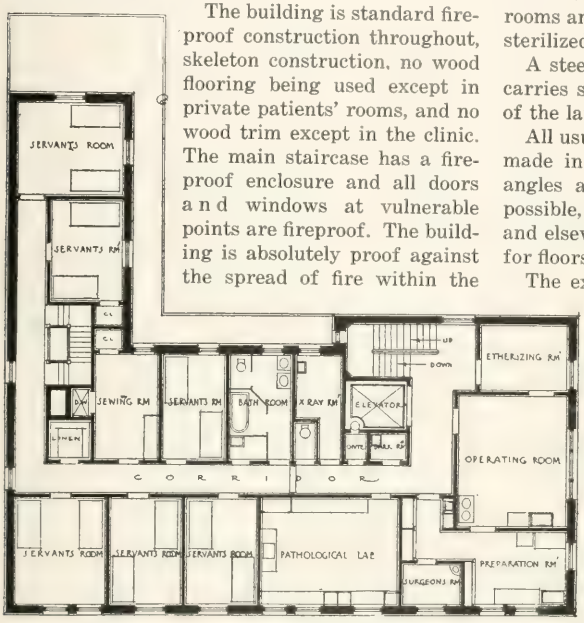


Fig. 10. Seventh floor of the Herman Knapp Hospital, containing operating rooms, room for preparation of dressings, pathological laboratory, and servants' room.

The building is standard fireproof construction throughout, skeleton construction, no wood flooring being used except in private patients' rooms, and no wood trim except in the clinic. The main staircase has a fireproof enclosure and all doors and windows at vulnerable points are fireproof. The building is absolutely proof against the spread of fire within the building and against the communication of fire from neighboring buildings.

In each story there is a fire-alarm box from which a call can be sent, and, if any one of these boxes is operated, alarm bells will ring in all stories of the building. The building is provided with a standpipe with fire hose in wall cabinets in each story and with a fire-engine connection in the street.

The elevator is large enough to receive a wheeled stretcher and has a traction-type machine with switch control, all mechanism being in the roof house.

Service from the kitchen to diet kitchens and service rooms in the upper stories is accomplished by means of an electric dumbwaiter with fully automatic push-button control.

The building is heated throughout by direct hot-water radiation, supplied from boilers in duplicate, one boiler being used in moderately cold weather and both in severely cold weather. The heated water all goes first to the top of the building, where the distribution to the various risers is made, this arrangement of piping minimizing the friction in the system.

All water used in the building is filtered, the filters being arranged to remove organic matter and gases from the water in addition to the mechanical filtration. Water used in the operating rooms and for the treatment of patients is further sterilized by heat.

A steel clothes chute, with doors at each story, carries soiled linen to a soiled-linen room outside of the laundry.

All usual provisions for easy cleaning have been made in the building, through the rounding of angles and use of unbroken surfaces wherever possible, and in the operating rooms, toilet rooms, and elsewhere, through the use of tile and marble for floors and walls.

The exterior of the building is Italian Renaissance in style, and is of Harvard brick laid in Flemish bond, and has limestone and granite trim.

The following is quoted from the report of the Board of Trustees following one year's occupancy of the new building:

"The hope that the new location is a favorable one has been realized. The neighborhood is in a crowded tenement district, where no special eye hospital has been within reach. This has resulted in a smaller falling off of new patients than was feared from such a radical move, and at the same time we have been easily accessible to all parts of the city.

"The building itself has also proved all and more than was hoped. On a corner, near the Hudson River, and away from elevated trains, light and air have been a wonderful contrast to the old hospital, which of late years had been surrounded by lofty buildings and fur-curing sweatshops.

"The practical usefulness of the building is entirely free from disappointments. The high transom windows ventilate efficiently even in the hottest weather, and the heating system stood the test of a very severe winter. The arrangements of the various rooms for handling the outpatients have proved well thought out, there being no waste of space or time during dispensary hours. The housekeeping parts of the hospital are well adapted to its needs, and the running of the building is systematized to the finest possible point. The entire equipment has proved perfect.

"We feel that our thanks are due to the architects, Messrs. Crow, Lewis & Wickenhoefer, for the splendid building which they have erected for us, and the painstaking and conscientious work with which they have followed every detail in its construction."

Slight small injuries and they'll become none at all.

THE CLINICAL LABORATORY OF ALBANY HOSPITAL

An Experiment in Laboratory Administration—Coordination of Clinical and Laboratory Activities Necessary for Higher Efficiency—New Positions of Medical Staff Director and Supervising Laboratory Nurse

By CLARENCE F. GRAHAM, M. D., Albany, N. Y.

THE problem of the clinical laboratory for the hospital of moderate means has not yet been solved in a manner satisfactory at once to the hospital superintendent, the attending staff, and the resident staff. The superintendent is confronted with the necessity of the expense of a resident pathologist, or of seeing the costly laboratory equipment rapidly deteriorate. In the absence of supervision and of constant attention to details, the laboratories become slovenly and the interns discouraged, and the routine work is done without interest or care, simply as a necessary evil. Many a "sink test" can be traced to a dirty laboratory.

Without proper instruction of the nurses, the blood for the Wassermann will find its way to the incubator and the culture to the refrigerator. Even the presence of a pathologist does not entirely remedy the conditions, unless he be also engaged in the clinical work of the hospital and able to appreciate the peculiar requirements of clinical methods. Even the collection of a twenty-four-hour specimen of urine demands careful attention, if any valid conclusions are to be drawn from its quantitative examination.

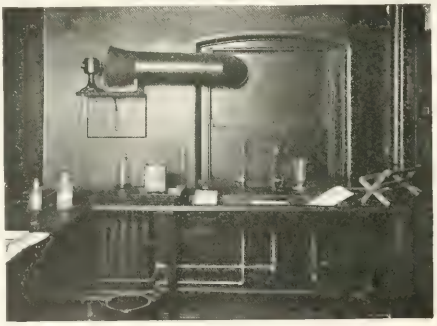


Fig. 1. Ventilating system in the dark room of the clinical laboratory, Albany Hospital.

The purpose of this article is to describe in some detail an experiment in laboratory administration, which, although still in progress, is already producing results more satisfactory than any before obtained in the particular hospital. If it should evoke discussion and a disclosure of methods that have given good results elsewhere, it may assist in the solution of a difficult problem.

LOCAL PROBLEM

An open hospital of 400 beds, receiving the private patients of from thirty to forty physicians as well as public patients of the attending staff, running two dispensaries, and instructing in its wards the students of an affiliated medical school, finds its laboratory facilities inadequate for proper work. There is no resident pathologist, but the pathological work is done in a corporate laboratory a stone's throw away, under yearly contract, so that the routine work of the interns is without supervision except such as may be exercised by physicians interested in particular cases.

The previous laboratory facilities had consisted of one room opening from the main corridor and fitted with benches, sinks, and gas. This room had been restocked with apparatus and reagents at least four times in ten years and everything had been dissipated with such amazing rapidity that a tradition had grown up that a laboratory could not be maintained. With no supervision of the apparatus, anything needed in a ward could be taken at once from the laboratory, without the formality of requisition.

It was decided not to attempt any extensive use of this room further, especially since a whole floor in a building formerly used as a nurses' home was standing empty and seemed well adapted for laboratory purposes. This building runs back from the main corridor, and the floor selected communicates with the second-story main corridor by a short flight of steps.

Since the rearrangement consisted chiefly in the provision of ample bench room and abundant sinks, gas cocks, electric connections and shelves, an architect was not employed, but a member of the medical staff drew the plans and supervised the construction. The saving so effected outweighed the unavoidable crudities of some parts of the work, and this economy can be recommended. The work was done by one of the best builders in the city, who took a personal interest in the success of the undertaking, and to him the good results obtained are largely due. For economy's sake, open construction was used throughout, except for three apparatus cabinets in the chemical room. Besides reducing the expense, this expedient makes the laboratory much easier to clean, and avoids the usual accumulation of rubbish and dust in drawers and cupboards. For the bench tops, poplar treated with the usual chemical finish was employed.

Twelve rooms of the twenty-two on the floor were utilized. Their description follows:

Dark Room.—Bench on two sides, with a sink measuring 22 by 42 inches, shelves along one side of the room, and a ventilating system. The bench has a hinged section 3 feet long, which lifts up to allow access to a plate rocker. The ventilating system furnishes a constant supply of fresh air by the use of an ordinary 8-inch fan.

Receiving Room.—This room already contained a brine-pipe refrigerator. The installation consists of a bench on three sides with a sink, shelves, a hood for stool specimens, and a refrigerator adapted for use as an incubator by the insertion of a heating unit and thermoregulator combination. This room serves as a receiving station for all specimens. Here the bottles are washed, sterilized, and relabeled, and checked out to the wards.

Fig. 2. One of the two service laboratories of Albany Hospital. Each man who works in these two rooms has his own set of reagents in neatly labeled bottles, his own burner, test tubes, funnel, etc., and each man is responsible for the condition of his own bench space.

Service Laboratories.—These consist of two rooms, each fitted with standing-height benches on three sides, a sink in each side-wall bench, and a single reagent shelf along each side wall. Each room has a microscope by the window, and a small electric centrifuge in the corner farthest from the light. The centrifuges are mounted on small squares of orthopedic felt placed directly on the benches, and produce no noticeable vibration when running. The controlling rheostats are arranged with the first contact a dead point, and no switch is used. It is, therefore, impossible to start the machine with a jerk, since it can be stopped only by turning the rheostat back to the starting contact.

Four men work in these two rooms, and each man has his set of reagents in neatly labeled bottles, his own burner, test tubes, funnel, and other apparatus. Each man's name is posted above his bench space, and he is responsible for its condition. The unassigned portions of the benches are used for special work, such as staining and quantitative estimations.

Stock Room.—This room is fitted with benches along two sides, a large sink, and abundant shelf space. The laboratory stock is kept here, and solutions are made up in large quantities and stored in siphon bottles on the shelves, with a drip trough under the delivery tubes of the bottles.

Physical Room.—Benches along two sides, and a large sink. The balances, spectroscope, potentiometer, and nephelometer are mounted in this room, which is free from fumes.

Office.—Desk, typewriter desk, table, filing cases, and a bookcase make up the equipment of this room.

Pathological Room.—This is equipped with sitting-height benches along three sides, a sink with four washing faucets over the drain board, and two stacks of shelves. Dry and steam sterilizers, an electric incubator, and a Barnstead still are installed here and the room is used for research.

Chemical Room.—This room was made from three rooms by the removal of partitions. It contains two chemical benches projecting into the room from the outer wall, and benches on three sides. Three apparatus cabinets cover the inner wall. There is a fume hood in one corner, ventilated by a fan, and with outside control of gas, water, and electricity. A large centrifuge is permanently mounted on a low stand in one corner, and a shaker on a 300-pound concrete block is suspended below one of the benches by spiral springs which completely take up the vibration. The room is not piped for vacuum and pressure, but a Crowell blower with motor drive is mounted on a low-wheeled truck and can be plugged in on any of the electric receptacles wherever it is needed. For prolonged operation under load the blower is cooled by connection to one of the faucets of the water supply. This arrangement of the blower has proved most satisfactory.

The other equipment of the chemical room follows that ordinarily found in such a department.

The electrocardiograph is also operated as a

branch of the clinical laboratory, and the apparatus is mounted on the main floor of the same building and has its own dark room. The wards are wired in the usual manner.

So much for the physical plant. It was recognized even before the construction of the laboratory that its administration would be the real problem on which the whole success of the undertaking would depend, since the previous laboratory had failed for want of adequate supervision. Two administrative positions have been created, which are, perhaps, new in laboratory management, that of the medical staff director, and that of the supervising laboratory nurse. The director is a member of the dispensary staff and an instructor in medicine of the medical college, so that he is in close touch with the medical staff of the hospital. His connection with the attending staff allows him to discover the needs and aims of the medical body, while his control of the laboratory enables him to meet the requirements of the clinical departments. Without some such coordination of the clinical and laboratory activities there is certain to be lost motion and diminished efficiency. The director has undertaken the preparation of rules for the collection of the various clinical specimens for examination in the laboratories, and has arranged for suitable containers. He has outlined the method of entering the reports in the ward histories, drawn up the forms, and devised filing systems for the preservation of necessary records of the work done. All this, of course, has been after consultation with the attending staff, so that their ideas and desires are incorporated in the system. In his relation to the laboratory, the director has also tried to meet the wishes of the men who do the actual work—the interns—with the firm conviction that contented workers make good work.

Fig. 3. Laboratory of Albany Hospital, showing open construction.

As the director makes the contact between the laboratory and the medical staff, so the supervising laboratory nurse makes the equally essential contact between the laboratory and the nursing staff. She devotes her whole time to the laboratory, and ranks with the ward supervisors. Her duties already are numerous, and expand constantly as the routine becomes more automatic; in fact, the holder of this position can make of it almost what she will. At present the supervising nurse's duties comprise the general oversight of the laboratory housekeeping, the making up of solutions, the replenishment of stock, the checking out and care of apparatus, the collection of the laboratory reports and their delivery to the wards, the checking of specimens for delivery to the pathological laboratory, and the operation of the electrocardiograph. In addition, she conducts a clinical pathology course for nurses. At first glance this seems a formidable list, but the work involved has been reduced by various expedients and short cuts.

The cleaning of the laboratory is done by a man who devotes his whole time from 7 a. m. to 5 p. m. to this work and other tasks in the department. He has so developed a sense of responsibility that he needs no oversight—in fact, he takes the greatest interest in all the laboratory routine. It is absolutely necessary that such an attache should be able to use tools well, for repairs and alterations are constantly needed where so much apparatus is in use. A small workshop has been fitted up for this purpose, and is a daily convenience.

The laboratory solutions are made up in large quantities, and a typewritten list of formulas is posted in the stock room for quick reference. Stains are kept in the refrigerator in saturated alcoholic solution, and diluted as needed. Wright's stain is made up from the Burroughs-Wellcome tabloids at frequent intervals. Dirty slides are collected in wire baskets and boiled in cleaning acid, a thousand at a time, to be used over and over. Litmus solution is used instead of paper for testing the reaction of urine. Replenishment of stock is made monthly as far as possible in order to cut down the number of orders sent to the dealers. In the stock room a slate is hung, on which needed supplies can be noted.

Apparatus is checked out of the stock room to the interns as individuals, and each man is required to sign a receipt for such things as blood counters and hemoglobinometers. For such special procedures as the quantitative determination of glucose, chlorids, and gastric acidity and for the phenolsulphonephthalein test, separate sets

Fig. 4. Shaker mounted on a 300-pound concrete block suspended by spiral springs which completely take up the vibration.

are kept always in readiness on wooden trays about 18 by 24 inches in size. This obviates the necessity of collecting all the different pieces of glassware, filter paper and reagents every time a determination is made, and has proved a great time-saver. Of course, there is some duplication of apparatus by this method, but it is possible to have everything the best obtainable, since the trays are checked out and examined when they are returned. Typewritten directions for each procedure are mounted under glass on the corresponding trays.

The use of individual trays in this way is capable of extension to many other procedures, with good results in the saving of time and apparatus. It is a well-known fact that a large part of the time required for any clinical chemical procedure is taken up simply in assembling the apparatus and reagents and refreshing the memory as to the steps, while the actual operation is usually rather short. Such trays might well be made up for spinal fluid examinations, blood cultures, stool cultures, frozen section work, milk analysis, and other operations which are done only from time to time under the conditions of any particular laboratory. The trays can be stored where they do not take up the working space, and are immediately available when needed. With the reduction of hospital staffs to the minimum, every saving of time and labor becomes important.

In the matter of laboratory reports also certain time-saving features have been introduced, with the inevitable disadvantages which accompany short cuts. Two forms of laboratory sheet are provided, and a separate sheet is used for each report, unless the same worker happens to carry out several procedures on a single case at one time, when the reports are combined on one sheet. The disadvantages of this method are that it makes the ward history bulky if much work is done on any one case, as may occur with nephritis, diabetes, or blood diseases, and that it is wasteful of paper. On the other hand, it permits the original signed report to remain in the history as a legal record, and it eliminates transcription of reports, with the

Fig. 5. Crowell blower with motor drive mounted on a low-wheeled truck for use in the chemical laboratory. It can be plugged in on any of the electric receptacles wherever required.

attendant errors and waste of time. Inexpensive paper can be used, since the sheet is written on but once. This method of entering the laboratory reports was decided upon after several other methods had been thoroughly tested and found too time-consuming. Naturally, the histories do not look as well, but here again economy outweighed esthetics.

The reports of the chemist are entered on the

same laboratory sheets, and all of the laboratory reports are delivered to the wards by the supervising nurse, who makes the rounds of the hospital two or three times a day. Wire baskets are provided in the laboratory to receive the reports, and the intern's duty ends when he leaves his report in the basket. Consequently there is no delay in the delivery of reports because the interns forget to leave the reports when they are in the wards, as so often happens if the intern must both do the laboratory work and deliver the report.

The chemical work of the laboratory is under the supervision of the professor of physiological chemistry of the medical college, who acts as consulting chemist. His assistant, a young woman

Fig. 6. Tray for the estimation of dextrose. Sets are kept in readiness for use, thus preventing loss of time in collecting apparatus.

with a good college training in chemistry, devotes her mornings to the hospital work and her afternoons to work at the medical college.

There is no question that the greater part, if not all, of the routine clinical laboratory work in the ordinary hospital could be done by well-trained non-medical assistants, for this is already an established method in many laboratories, and produces satisfactory results. Where the amount of routine warrants, a separate technician can be trained for each procedure, as urinalysis, blood-counting, bacteriological examination, and the other common clinical methods. With the imminent reduction in the medical staffs of all hospitals, it is here that the first reduction of the interns' work will probably have to come. With this probability in mind, classes of volunteer assistants have been organized to carry on the laboratory work and other related tasks, in order to free the medical staff from routine, and allow them more opportunity for a higher type of duties. By announcement in the papers, volunteers were secured from among the young women of the city, and over a dozen are now in training as clinical assistants. Classes in urinalysis and blood-counting meet twice a week for two-and-a-half-hour periods. The chemist has two understudies who have had some chemical training, and they have already mastered the preparation of a correct Dakin's solution. Several assistants in the x-ray department are learning the operation of the apparatus, the giving of barium meals, and the development of the plates. Dispensary and follow-up work have been taken up by several others. Although the plan is still in the experimental stage, the results so far achieved amply warrant continuation. There is no reason why all routine laboratory work, anesthesia, history taking, operation of the x-ray machine and therapeutic apparatus and many other duties could not be carried on by properly trained women, provided there be adequate and frequent supervision of their work.

Tuberculosis Hospitals in New York State

With a view to mobilizing all resources which will assist the counties of New York State in carrying out the provisions of the recently enacted law requiring the construction of tuberculosis hospitals in counties of 35,000 population or more, Dr. Hermann M. Biggs, state commissioner of health, has appointed two committees which are to take entire charge of the tuberculosis situation in the state. The first committee, which is headed by Dr. John A. Smith, secretary of the department, will have general supervision of sites, plans, construction, and equipment of tuberculosis hospitals, and will carry on the anti-tuberculosis campaign in the state. The second committee, which is composed of some of the foremost authorities on the subject in the state, will act as an advisory board.

With Dr. John A. Smith on the first committee will be Dr. O. R. Eichel, as vice-chairman; Dr. E. S. McSweeney, as secretary; George J. Nelbach, of the State Charities Aid Association; C. A. Holmquist, as engineering expert; Frederick Sprenger, as construction expert; J. D. Burt, as architect, with Dr. Matthias Nicoll, Jr., deputy commissioner of health, as a member of the committee ex officio.

The advisory committee consists of Dr. Albert H. Garvin, superintendent of the New York State Hospital at Raybrook; Dr. John S. Billings, of New York City, medical director of the New York Telephone Company; Dr. Charles Stover, of Amsterdam, president of the board of managers of the Montgomery County Tuberculosis Hospital; Dr. Horace J. Howk, physician in charge of the Metropolitan Life Insurance Hospital at Mt. McGregor; and Dr. Lawrason Brown, of Saranac Lake.

THE GOVERNMENT'S WORK IN THE ERADICATION OF TRACHOMA*

Magnitude of the Problem—Heavy Infection in the Appalachian Mountain Region—Increase of the Disease—Six Free Hospitals Established by the Government to Treat and Educate Sufferers and Prevent Spread of the Disease

By JOHN McMULLEN, M. D., Surgeon U. S. Public Health Service, Lexington, Ky.

FOR the past twenty years any alien arriving in this country and found to be suffering with trachoma was deported to the country whence he came, as the government has declared this to be a dangerous contagious disease and its deportation is mandatory.

Trachoma has usually been considered as an exotic disease, and our immigration laws have been relied upon to exclude it from the country. Investigations by the United States Public Health Service for the past few years, however, show that

Fig. 1. An illustration of the need for the service rendered by the government trachoma hospitals. This girl, aged 18, states that for about ten years she has been unable to open her eyes on account of trachoma. At the time this photograph was taken her disease had made her an inmate of the poorhouse in Muhlenberg County, Kentucky.

thousands of cases of this disease exist in various sections of the country. A heavy infection has been found among the Indians and some sections of the Appalachian Mountain range. In other sections it has been found more or less prevalent. The heaviest infection has been found in the Appalachians, about where the states of West Virginia, Virginia, and Kentucky are adjacent. A survey made of twenty-three counties in this section showed that 1,280 out of 18,000 people examined, 16,696 being school children, were suffering from trachoma. Many of these children were unable to attend school except irregularly during the remissions of the disease. Adults were greatly handicapped in earning a livelihood; many were practically blind and others totally so from trachoma. Large numbers of people in those sections where trachoma is prevalent suffer untold agony from this disease, and the deformities and mutilations resulting are mute evidences of its destructive power, presenting sights pathetic in the extreme.

There is no disputing the fact that trachoma is communicable, and there is no lack of evidence that this disease is decidedly on the increase. During the survey old cases were found which had existed for generations and had been the direct cause of numberless victims, and, where the total number of cases were in the hundreds, it is now in the thousands.

This army of trachoma cases is not confined to any one state; the victims travel at will, carrying their infection with them without let or hindrance from one state to another, and prevention of the spread of trachoma in interstate traffic is what particularly interests the general government.

It is realized that the widespread dissemination of trachoma constitutes a serious public health problem in this country, and the United States Public Health Service undertook some years ago to demonstrate methods for the eradication of this disease and the prevention of its further spread. With this end in view, small free hospitals were established in the infected districts where they would be accessible to those suffering with trachoma.

The first hospitals established were about twenty-five miles from the railroad, but when the hospital was no longer needed in one section it was removed to another, and in this manner the field of usefulness of each hospital was enlarged. The hospitals are now six in number, and all of them situated on the railroad, as they are accessible to more patients, as follows: Jackson, London and Pikeville (Kentucky); Coeburn (Virginia); Welch (West Virginia); and Tazewell (Tennessee). Two of these hospitals have a capacity of twenty-five beds each and the other four of twenty beds each. Each hospital is in charge of a physi-

*Articles on trachoma have appeared in The Modern Hospital as follows: "Trachoma in the Mountains of Kentucky," by J. A. Stucky, July, 1915, page 51; "Trachoma in the United States," by Gordon L. Berry, November, 1915, p. 368.

cian who has had special training in eye, ear, nose, and throat work, and a complement of trained nurses and attendants. Only active trachoma is admitted to the hospitals, but in the dispensary practically all conditions and diseases of the eye are treated among those who are either too poor or too remotely situated to consult a specialist.

Fig. 2. The "blind leading the blind" as a result of trachoma. The man behind is totally blind and the man in front nearly so.

Upon admission to hospital each patient is informed of the communicable nature of his disease and cautioned not to transmit it to others. Individual towels, cups, etc., are given each patient for use during his stay in the hospital. Absolute cleanliness is insisted upon, and the doctors and nurses give regular talks to patients in the hospitals on various public health subjects, and the reason for maintaining free hospitals is explained. It is endeavored so to conduct the hospitals as to give an object lesson to the patients with the hope that they will emulate the example when they return home.

Dispensary patients are told the nature of their disease and the necessity of using individual toilet articles; they are given popular literature on trachoma, its nature, prevention, etc. After treatment all patients are furnished with a clean gauze handkerchief. The importance of the educational part of the work is recognized and this is furthered by talks in schools, court houses, teachers' institutes, etc., and the distribution of popular literature on the nature and prevention of trachoma. The doctors and nurses also do district work and visit homes in the remote sections to follow up some of the hospital cases, induce others to come in for treatment, etc. One nurse assigned exclusively to district work rode 4,000 miles on horseback over rough mountain roads in ten months.

During the twelve months ended June 30, 1916, the six trachoma hospitals had a total daily attendance of 19,530 and 112,055 individual treatments were given; 1,880 patients were admitted to the hospitals, and 1,687 operations were performed; 1,153 were under local and 534 under general anesthesia. The sixth hospital was established only during the latter ten months of this period.

In addition to the work done at the hospitals, field clinics have been held in various sections of the country for the purpose of arousing local interest and demonstrating to the doctors the various stages of the disease, its sequelæ, the diagnosis, and the treatment. These hospitals are also used for educational purposes, and doctors and others interested are urged to visit them and see

Fig. 3. The U. S. Public Health Service Trachoma Hospital at Pikeville, Ky., one of the six free hospitals established and maintained by the government for the eradication and prevention of the disease in the Appalachian Mountains.

in detail how trachoma and its various sequelæ are treated, and learn to perform the simpler operations. Considerable attention is given to beautifying yards of the several hospitals by growing flowers and lawns.

The ages of our patients include both extremes of life. At least one-half of the trachoma cases have impaired vision. Ulcer and corneal opacity occur in 25 percent of the cases; pannus in 20 percent; photophobia was present in 33 1-3 percent, and entropion and trichiasis were noted in 10 to 15 percent of the cases. Impairment ranged between slight defects to total blindness.

Treatment of trachoma is surgical in the great majority of cases. The operation of grattage has

been performed in some form from time immemorial, but upon the quality and quantity of this operation depends the result.

The operation as performed in these trachoma hospitals is done with a specially devised forceps for everting the eyelid, two small scalpels, horn spoon for protection of the cornea, Demarres forceps, tooth brush of medium stiffness, mercury bichloride solution of 1:2000 strength, and plain sterile gauze. The eyelid is thoroughly everted and the granules superficially incised and the thickened conjunctiva carefully scarified with the scalpels, care being exercised to include the culde-sac. The surfaces are then gone over with the brush and bichloride solution, followed by the thorough use of the gauze. The operation can usually be done under local anesthesia, but in young children and very nervous patients a general anesthesia will be required. Immediately following the operation the everted conjunctiva is washed with boric solution to remove all blood

Fig. 4. Patients being operated on at a special clinic held by Dr. John McMullen. Two operating tables are necessary to accommodate the large number applying for treatment during the three days' clinic.

clots and lessen the tendency to adhesions. During the twenty-four to forty-eight hours after a radical grattage, the eye should be under the surveillance of the surgeon or qualified assistant to guard against adhesions and other complications. After-treatment consists of cleansing the eyes carefully every three hours and the use of 20 percent solution of argyrol. After five or six days, if uneven granular or rough surfaces are present, the lids are everted and lightly brushed with a 1 or 2 percent silver nitrate solution, repeated as necessary and as the individual case will stand.

The various sequelæ are given the necessary treatment. Patients suffering with entropion, trichiasis, central opacities, etc., are often given the greatest relief. When a cure has been effected the case is refracted and glasses prescribed where warranted.

The service method of establishing hospitals in trachoma centers has proved entirely satisfactory, and the results are extremely gratifying. Adults who had suffered from trachoma for years, and were dependent upon their friends or the county for support, have been relieved, and are no longer a menace and have taken their place in the community and earning a livelihood for themselves and family. Children unable to obtain an education on account of the constant physical suffering

Figs. 5 and 6. Before (left) and after (right) operation. This 10-year-old child was practically blind and suffering from extreme photophobia when admitted to the hospital. She is shown on the right about three months after the first operation with complete recovery and very fair vision.

and impaired vision are now able to attend school regularly. During the fiscal year 1916 there were 1,500 cures effected.

It should be remembered that the majority of the patients treated in these hospitals are without means, would otherwise never have been given relief and remained a menace to their community. The total cost of maintaining these hospitals, including salaries of the doctors, nurses and attendants, is about twenty dollars a day each.

The Sisters of Bon Secour will shortly open a new hospital at Fayette and Pulaski streets, Baltimore. Fifty private patients can be accommodated. There will be no public wards. The order has been established in Baltimore for 25 years and conducts a convent and a day nursery there. It also maintains day nurseries and hospitals in Philadelphia, Washington, and Detroit.

The Doctor

Ah, who would choose to be a Doctor—
A Microbe-stalking Pill-concocter!
At 3 a. m. they ring his Bell
Because some Fellow's dined too well.
He has to leave a Joyous Frolic
Because a Baby gets a Colic;
And while subduing Mortal Ills
With Jalap, Ipecac, and Squills,
He has to hear the Conversations
Of Patients, matching Operations;
And then, to crown his Pain and Strife,
They vilify him here, in "Life."

—Arthur Guiterman in "Life."

AN EMERGENCY HOSPITAL FOR THE AFTER-CARE OF INFANTILE PARALYSIS

Heavy Incidence of the Disease in the Borough of Brooklyn—Emergency Hospital Supported by Funds Raised Through the New York American

By LOUIS C. AGER, M. D., Brooklyn

As in 1907, so in 1916, the brunt of the burden resulting from the epidemic of infantile paralysis in Greater New York has fallen upon the borough of Brooklyn. The *Weekly Bulletin* of the Department of Health for October 7, 1916, shows that Brooklyn, with scarcely more than a third of the total population, had nearly half the total number of cases and deaths in Greater New York. In addition to these figures, a comparison of the orthopedic resources of the two larger boroughs still further emphasizes the emergency with which Brooklyn had to deal in the fall of 1916. The borough of Manhattan, which had only 2,512 cases and 658 deaths, as against Brooklyn's 4,512 cases and 1,125 deaths, had in the New York Orthopedic Hospital, the Hospital for the Ruptured and Crippled, the Hospital for Deformities and Joint Diseases, the Post-Graduate Hospital (orthopedic ward), St. Luke's Hospital (orthopedic ward), the New York Foundling Hospital (orthopedic ward), and the Seton Hospital, Nazareth Branch (orthopedic ward), a total of 441 beds and an average daily dispensary attendance of 650. The borough of Brooklyn, with nearly twice as many cases and deaths as Manhattan's, had, in the Long Island College Hospital, the Brooklyn Hospital, St. Mary's Hospital, and the County Hospital a total of only 133 beds and an average daily dispensary attendance of 50.

It is recognized that these figures do not present with mathematical accuracy the complete resources of either borough. A small amount of operative orthopedic surgery is conducted in the general surgical wards in various other institutions in Greater New York, and the actual outpatient attendance is not necessarily a proof that a dispensary is being used to its full capacity. Nevertheless, these two sources of error would probably add a proportional increase to the figures for both boroughs.

During the acute stage of the epidemic it was recognized that the orthopedic resources of the borough of Brooklyn would have to be increased many fold in order to give proper care to the paralyzed children. The Brooklyn Committee for the Care of Crippled Children immediately took steps to increase the facilities at the Long Island College Hospital and the Brooklyn Hospital, and the House of St. Giles the Cripple speeded up as far as possible the construction of the new building in the upper part of the city. At the same time Mr. William Randolph Hearst came forward with an offer to raise through the *New York American* a substantial sum of money to be used in whatever way seemed best to meet the situation. After several conferences it was decided to organize, somewhere in the newer section of the borough of Brooklyn where a very large proportion of the cases of paralysis had occurred, an orthopedic dispensary and hospital at a distance of several miles from the two older institutions doing the major part of the orthopedic work for the borough. Owing to the very stringent building laws recently adopted covering hospital construction in New York City, there were very few buildings that could be made use of for this purpose without expensive alterations. The construction of a new building was considered, but it was realized that the time required would seriously interfere with the usefulness of the institution for emergency purposes. Fortunately the Brooklyn Association for Improving the Condition of the Poor owned a small building near the desired location, which it lent to the committee in charge of the fund for a period of two years or more if needed. The location was suitable both on account of its distance from the two older hospitals carrying on most of the work and on account of its proximity to the large foci of the disease indicated by the shaded areas. This two-story-and-a-half detached brick building, located at 470 Throop Avenue, is shown in Fig. 1. The building had been used for housing a branch office and a certain amount of industrial employment, so that the floor space was very much cut up by partitions. The well-known architects, Crow, Lewis & Wickenhoefer, made a thorough inspection of the building and supervised its remodeling in accordance with the suggestions of the committee in charge. Fortunately the floors were entirely supported by the main walls of the building, so that practically all of the partitions could be removed without weakening the construction. By the time the matter had reached its concrete form, it was realized from the extent of the epidemic that even with the use of every available foot of space the institution would be crowded to its utmost capacity. On this account, the plans were altered several times before final adoption, and some of the quarters provided, particularly those for the office force, are somewhat inconvenient. Nevertheless, all branches of the work have been developed

simultaneously, and one of the chief reasons for the efficiency of the institution is the cheerful co-operation of all those engaged in the work regardless of personal inconvenience.

The floor plans (Figs. 2 and 3) illustrating the paper give an excellent idea of the arrangement of the building and many of the details will be given later.

The organization of the institution comprises an administration department, a surgical department, an electrotherapeutic department, a department of massage and muscle-training, a brace department, and a social service department.

Fig. 1. The Brooklyn office building which has been remodeled to furnish a hospital for the after-care of infantile paralysis.

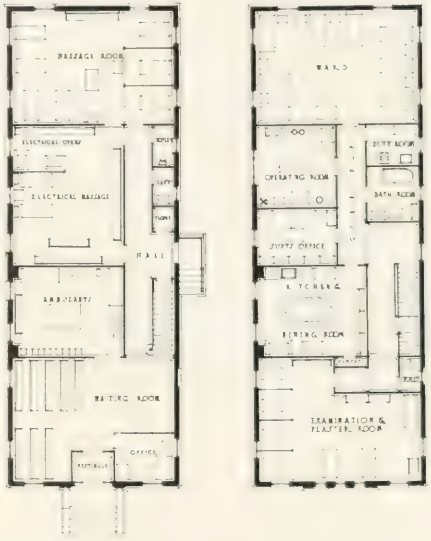
I. ADMINISTRATIVE DEPARTMENT

The force of the administrative department consists of a woman superintendent, a janitor, a cleaner, a cook and a nursemaid. The work of this department covers the care of the building, buying of supplies for all departments, the keeping of inventories and auditing the bills, the supervision by the superintendent of janitor, cleaner, nursemaid and cook. On account of our lack of space no member of this force sleeps in the building, and all the laundry work is done outside. A young student from a near-by institution sleeps in the building as a night watchman. To secure the best results in an institution of this kind, the duties of this administrative department and its relation to all the other departments must be very carefully defined and thoroughly understood.

II. SURGICAL DEPARTMENT

The surgical department consists of a visiting orthopedic surgeon, three attending orthopedic surgeons, a head nurse and three assistant nurses.

The visiting orthopedist is a man of large practice and wide experience, who gives a few hours a week more particularly in a consulting capacity.



Figs. 2, 3. First (left) and second (right) floors of the building shown in Fig. 1, as remodeled by the architects, Messrs. Crow, Lewis & Wickenhoefer.

In order to secure efficiency, it was intended at the outset that a paid medical staff of men young enough to give a considerable part of their time, six days a week, should be secured. Later a part-time service with less remuneration was determined upon. We were exceptionally fortunate in our selection of this staff of orthopedic surgeons. All three have had excellent training and are enthusiastic workers. Their hours for the routine examination and reexamination of patients and the application of plaster and various forms of apparatus are from 2 to 4 p. m., but these are frequently prolonged by press of work. The operative work is performed in the mornings, beginning at 8 a. m., two or three times a week.

Although this hospital was established primarily for the care of victims of the recent epi-

demic, a small percentage of other orthopedic work has drifted in from time to time. A large room on the second floor of the building, suitably equipped with plaster sink tables and divided by washable curtains, is used for the examining and plaster room (Fig. 4).

A large room on the same floor with windows on three sides makes an ideal ward containing eight beds. Owing to the enormous amount of work entailed in the original examination and differentiation of the large number of cases applying during the first months of the work, the operating room did not come into use until late in February.

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Fig. 4. Room equipped with plaster sink tables and divided by washable curtains, used for examining and plaster rooms.

During March nine operations were performed and during the first half of April there have been fourteen.

The operating room and a small room containing a sterilizer are located next to the ward.

III. ELECTROTHERAPEUTIC DEPARTMENT

This department is conducted by the services of a neurologist and part time of one of the nurses from the surgical department.

The use of electricity in poliomyelitis is considered useless by a very large number of orthopedists, but many neurologists are convinced that it has definite value. Although I was very skeptical when our institution was opened, it seemed best to make use of an agent that was endorsed by many observers. After consulting with some of the leading neurologists of New York City, we secured the services of a neurologist who had had wide experience with electricity during the epidemic of 1907 and who has given much of his time to that kind of treatment for the past ten years. He receives the same remuneration as the two junior orthopedic surgeons and gives the same amount of time to the work.

IV. DEPARTMENT OF MASSAGE AND MUSCLE-TRAINING

The staff of the department of massage and muscle-training consists of a woman physician, three graduates in muscle-training, five masseuses, and one masseur.

This department is open continuously from 10 a. m. to 4 p. m. or later. The doctor in charge is on full time. Some of the other members of the force are on full time and some on half time, making a total of approximately thirty-three hours a day treatment.

As a preparation for massage and muscle-training, practically every child first receives from five to fifteen minutes in electric bakers constructed of canvas, heated by electric-light bulbs similar to those employed in hospitals to produce diaphoresis. The patient then receives muscle-training, followed by massage. The muscle-training is carried on very strictly along the lines laid down by Dr. Lovett; that is, the smooth metal tables and a plentiful supply of talcum powder are employed for this work in all types of lateral and assisted movements. During cold weather the white enamel tables were too cold for comfort, but this trouble was obviated by the introduction of a number of electric-light bulbs underneath them to give the necessary warmth. In all this work, as well as in the preliminary examinations, large paper napkins are supplied for each individual patient to prevent the possibility of transmission of infection by vaginal or urethral discharge.

Even in 1840 Heine drew attention to the fact that the temperature of these paralyzed limbs was far below normal and that circulation was poor. This condition has been recognized by every writer on the subject since, but the practical relation of this fact to treatment has never been very generally appreciated. Nevertheless, it has a very important bearing upon the value of massage and muscle-training.

A spirited and at times acrimonious discussion has been carried on in New York for the past six

months in regard to the value of this kind of treatment and also as to the frequency with which the treatment should be given to secure the best results. That the treatment produces improvement aside from the return of function normally occurring soon after a recent infection is proved by the fact that we have been treating

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Fig. 5. Child with double lateral curvature, as a result of paralysis of the muscles of the back, in a suspensory apparatus, the same that is used for the application of plaster jackets, as a part of routine treatment for the purpose of stretching by gravity the contracted back muscles.

with remarkable success a number of cases of from two to nine years' duration in which there had been no appreciable improvement for a long time. Some orthopedists prescribe daily treatments, others do not. This institution was established with the belief that comparatively short treatments would give the best results and that it is quite easy in some cases at least to injure the patient both by overtiring the muscles and by a too active protein metabolism as to produce a high degree of acidosis. I have seen a typical acidosis with high fever, air hunger, vomiting and collapse appear so frequently in cases receiving indiscriminate treatment as to be absolutely convinced of the truth of this theory. Our statistics show, however, that there is little real danger of such an occurrence in an institution of this kind, as we have apparently averaged about seven treatments per child during the month of March.

V. BRACE DEPARTMENT

The brace department employs a force consisting of one brace-maker, one leather and canvas seamstress and one plaster-of-paris bandage-roller.

Originally it was intended to buy braces and all other forms of apparatus either from one of the large manufacturers or from some other institution conducting a brace shop. It was quickly realized, however, that the unprecedented demand for such articles in Greater New York would so delay the delivery as seriously to interfere with the success of this institution, and it was decided to establish a brace shop if room could be found for it.

Fortunately there was a dry, light cellar under the entire building, and about one-half of this floor

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Fig. 6. The brace-maker and his shop. The unprecedented demand for braces and other apparatus used in the treatment of infantile paralysis rendered it necessary to set us a shop within the hospital.

space, as shown in the plans, was divided off into two rooms to be used for this purpose. The larger room was equipped with an electric motor, lathe, bushing machine, bench, tools, and the latest type of gas forge with blower. We were successful in securing the services of an exceptionally expert brace-maker, and his full time is occupied in this work (Fig. 6). The smaller room is equipped with a heavy model electric driven sewing machine, tables, and supplies for bandage-rolling, leather-cutting, etc. Financially, as well as from the point of view of efficiency and convenience, the establishment of this department has proved to be a very wise undertaking.

VI. SOCIAL SERVICE DEPARTMENT

In the social service department are a head worker, an assistant worker, and a stenographer and typist. At the date of writing, we have enrolled for treatment in this institution over one thousand patients. To carry on even the most essential duties of social service for such a large group is a serious undertaking. The various cards

used for keeping track of the patients are illustrated in this article, and each family has a separate folder in the file and these folders are cross-indexed in various ways.

The head worker of this department was associated with the Central Committee on After-Care of Infantile Paralysis for some months before taking charge of our work, and was, therefore, thoroughly familiar with the problems that she would have to meet. One of her chief duties is to follow up the cases that do not return regularly for treatment. Their absence is indicated automatically in the file by means of a special card.

WORK ACCOMPLISHED

Since this hospital opened on October 7, 1916, there has been a steady growth in the amount of work to be done. The most important statistics for the month of March, 1917, are as follows:

Visits and revisits to the orthopedic surgeons	619
Operations performed	9
Number of patients treated	501
Number of visits made	3,587
Number of electric treatments	1,835
Number of baker treatments	3,086
Massage and muscle-training	3,474
Total number of routine treatments	8,395

COST

As our building is lent to us, it would be difficult to accurately estimate the primary cost of establishment.

Our pay-roll is a little over $2,000 a month, with sundry expenses of about $250.

THE WHITE OPERATING ROOM

Suggestion of Remedy for Its Defects—Beaked Caps and Amber-Tinted Glasses Used to Obviate Effect of Glare From White Walls

By WILLIAM LEE SECOR, M. D., A. M., F. A. C. S., Captain M. O. R. C., U. S. Army, Kerrville Hospital-on-the Guadalupe, Kerrville, Tex.

FOR years hospital architects endeavored to construct our operating rooms so as to admit just as much light as possible and from as many angles as possible. Circular rooms, octagon rooms, rooms with glass skylights, or even glass domes were constructed in an endeavor to reach the ideal which would provide an abundance of soft light from above and from every side. These operating rooms were lined with white walls of tile or enamel with white ceilings and floors, so that a high percentage of the light which entered the operating room was reflected from every surface.

During the past few years it has been suggested from several sources that our operating room walls should be colored or tinted gray, green, or even black, and that our sheets, towels and operating room furniture should be black or dark green, the reason given for the suggestion being that the glare of all white surroundings is detrimental to the vision of the surgeon and prevents him from obtaining as good a view as he might when working in deep cavities. The eye must accommodate to a large extent and rapidly to change from a view of the surroundings to a view of viscera lying deep in the abdomen or pelvis.

The point made by those who say that operating room glare is detrimental to the vision of the surgeon and prevents his best work is well taken, but the remedy suggested is far from ideal. There are two reasons for admitting sunlight to an operating room; first, to illuminate it, and second, to sterilize it.

The illumination of a room depends upon two factors, the amount of light admitted to the room and the amount of light reflected from the surfaces it strikes within the room. After a study of the coefficient of reflection of various colors, H. A. Gardner published his results in the *Journal of the Franklin Institute* for January, 1916, and showed that the coefficient of reflection of white is 88 percent, of light green 42 percent, medium green 14 percent, and dark green 11 percent. What is the advantage of going to great expense to permit an abundance of light to enter an operating room through expensive ground glass windows if only from 11 to 42 percent of it is to be used and the rest absorbed by the surrounding surfaces?

About four years ago we solved this problem to our satisfaction, and, having used the solution continuously since that time with very gratifying results, desire to recommend it for your trial. We built an octagon operating room, the ceiling of which was carried to a point, giving the effect of eight triangular panels; four of the sides from tip of pointed ceiling to floor are of heavy ground glass, which admits an abundance of north light. The walls, furniture, etc., are all white; to obviate the effect of the glare we have used beaks on our caps, and on bright days large amber-tinted spectacles are worn. The beaks on the caps

shield the eyes nicely and add much to the comfort of the operator, while the amber-tinted spectacles not only increase the comfort and do away with the bad effects of glare, but also serve to protect the eyes of the operator from infection, which a search of the literature will show to be of considerable importance.

The cap we use is a modified Mayo cap with small beak, and, to make it cooler, the back part

Beaked operating cap for use in white operating room.

of the skirt is cut away. The beak is made of several thicknesses of muslin with a number of rows of machine stitching and does not in the least hinder sterilization.

To tint the walls of an operating room not only does violence to the esthetic and psychic effect of the pure white room, but makes it much more difficult to keep the room clean and sterile. White will show up macroscopic dirt much better than colors and also makes it easier to rid the room of microscopic contamination, for the effect of strong light upon some of our most dreaded bacteria is well known.

In the wards and private rooms there is nothing more restful for the patients' eyes or more practical than light green ceilings dropped about four feet on the side walls with the lower part of the walls and woodwork done in cream enamel or washable flat tone.

There is no reason why the patients' rooms in the surgical department of a hospital should be tinted or frescoed, furnished in oak, walnut or mahogany, and provided with large rugs, pictures, and heavy draperies in an endeavor to make them homelike. This may be all right in the medical units, especially for nervous cases, those only slightly ill and those who spend a long time in the hospital.

The average surgical patient is only in the hospital for two or three weeks and the keynote of success in these cases is efficiency. I believe that more efficient service can be given in a room with plain white enameled walls and woodwork, composition floors with small washable rug, and high-class white enamel steel furniture throughout, than can be given in the highly decorated and draped rooms now being advocated by some.

THE NEW YORK CHILDREN'S EYE CLINICS

Work of the Bureau of Child Hygiene of the New York City Department of Health in Caring for the Eyes of School Children—Importance of the School Nurse—Prevalence of Contagious Eye Diseases

By WILLIAM MERLE D'AUBIGNE CARHART, M. D., Oculist, Bureau Child Hygiene, Department Health, New York

THERE are nine children's eye clinics in New York City maintained by the bureau of child hygiene of the municipal department of health. In these clinics all school children of any of the public or parochial schools are treated for eye diseases or fitted with proper glasses by a staff of competent specialists taken from the eligible lists of the municipal civil service. So extensive has this work in caring for the eyes of the city's school children become that an increase in the number of these clinics is urgently needed. Twenty-eight additional clinics for treating contagious eye diseases in the schools have been asked for and may possibly be provided next fall. Children can then be treated without the overcrowding and without the long journeys now inseparable from inadequate clinical facilities. Ultimately there should be clinics established in nearly every large school, so that treatment of eye conditions may be carried out with the least possible interruption of school duties. As it is now, the usefulness of these clinics is often sadly hampered by the children failing to continue in attendance if the clinic in question is at such a distance from home and school as to make frequent visits to it practically impossible. It has been found that a mile is about as far as children can habitually walk to a clinic, and carfare is out of the question for many of those most needing prolonged treatment.

To give a rough idea of the extent of this work in child hygiene, I may say that some of these children's eye clinics treat as many as 150 to 200 children for sore eyes in one day during the rush

season when in fall and winter the work is at its height. One clinic in six months had 1,585 new cases of sore eyes, and, counting revisits in that clinic, over 12,000 treatments were given in the same period of six months. These children are picked out as needing treatment for their eyes by the medical school inspectors in their daily visits for the inspection of each school, and are brought or sent to the children's eye clinic nearest the school by the school nurse or parent, where they are treated by the oculist in charge of the clinic.

Those of them who are suffering from inflammation of the eyes in a contagious stage of the disease are excluded from school until all danger of infection is past, and such children are followed up by the school nurse so as to insure faithful attendance at the clinic until discharged as cured.

The procedure followed in these children's eye clinics can be briefly described as follows:

Each child on entering the clinic presents a card from the school nurse stating whether the child is sent for contagious eye disease or for correction of refractive errors with glasses. According as this card states, an admission clinic card and a history card are made out either for treatment of eye disease or for refraction. Both eye diseases and refraction are treated in the same clinic, but, so far as possible, refractive errors are corrected on alternate days with contagious eye disease treatment.

The limits of this article prevent a detailed description of the refraction work of our children's eye clinics, and so I am forced to confine the present article to the methods used to combat contagious eye diseases in the schools.

In addition to the registrar who keeps the records and is in charge of the administration of the clinic, there is in some clinics, and should be in all, a clinic nurse to assist the oculist in his treatments. These children respond very quickly to the intelligent care of a sympathetic clinic nurse, and the comparative success or failure of a children's eye clinic depends almost as much upon the excellence of the nurse as upon the professional ability of the oculist. Nearly all forms of eye disease in children are treated in these clinics, although contagious diseases of the lids, such as trachoma and pinkeye, are given particular attention. Some eye diseases requiring special facilities or operative treatment are necessarily referred to public or private hospitals or clinics in the vicinity. By arrangement recently made with the Otisville Sanatorium, children with tuberculous eye diseases can be sent out of town for expert care at that institution. As can be easily understood, the treatment at these children's eye clinics is necessarily confined to simple medical treatment of the eyes, such as can be performed with the facilities furnished by the department of health and the department of education. Each child is treated in turn by the oculist, either daily or three times a week, as the case requires. Some children are given eye drops or collyria to use at home, although it has been found that many ignorant or careless children lose or throw away the bottles of medicine, and so we have come to depend almost exclusively upon treatment actually performed at the clinic by the oculist and clinic nurse.

Recently trachoma schools have been started where children afflicted with contagious trachoma can be isolated from other children and yet continue at their studies in special classes suited to their needs. In these schools intensive treatment for trachoma is carried out by a nurse in attendance all day, in addition to supervision and treatment by oculists who visit the schools as often as required. These trachoma schools seem to go far

Fig. 1. One of the eye clinics conducted in a public school by the New York City Department of Health.

toward solving the problem of treating severe contagious trachoma in an effective manner and at the same time allowing the child to continue his lessons in school. We have found it possible to accomplish a great deal of hygienic control and instruction by having the nurse in constant attendance, and children often improve much faster in these trachoma schools than in the regular children's eye clinics with little or no effective supervision or control. Intensive treatment repeated several times daily by a nurse properly trained in eye work and carefully supervised is much more effective than one routine treatment a day by an oculist or medical inspector, combined with the usual home disregard of medication ordered or instruction given. This phase of our work is worthy of more extended trial than it has yet been possible to obtain.

Trachoma is the most important of the contagious eye diseases treated in our children's eye clinics. In its various forms and phases, it is quite widely spread in all our schools, but nothing

like as prevalent as fifteen years ago, when the department of health began its trachoma crusade. In 1903 a preliminary inspection of one large school of over 3,000 school children disclosed over 700 cases of trachoma. Today that same school would give approximately 50 cases or less, all under treatment. Through systematic inspection in the schools and through treatment of the disease, when found, by oculists of experience and ability, trachoma is now practically under control in New York City. We have found that the virulence of the contagion of trachoma is largely removed by treatment of the disease along approved lines, and now we no longer exclude many trachoma cases from school if the children are faithful in attendance at the clinic. It is now only in cases in which there is a secretion of mucopus in the eyes or in which complications exist that we are forced at present to interrupt school duties to any great extent.

In one illustration I have shown a view of one of our children's eye clinics (Fig. 1), giving an idea of how the children are treated, and in another a view of the eyes of a child with trachoma (Fig. 2). The granulations of trachoma are the characteristic lesions of the disease, the removal of which by either medical or surgical means is the object of the treatment. Fortunately, the results of our fifteen-year crusade against trachoma have demonstrated that the disease can be controlled through faithful and scientific treatment by competent oculists in clinics equipped with adequate facilities. As these children usually become infected with this disease through the close associations of school life, there is an urgent moral motive for the establishment and extension of these children's eye clinics by municipal departments of health in close collaboration with the educational authorities. This beneficent work in child hygiene requires for its complete success adequate financial support from municipal boards of estimate and the appointment of a staff of oculists of wide experience and thorough training.

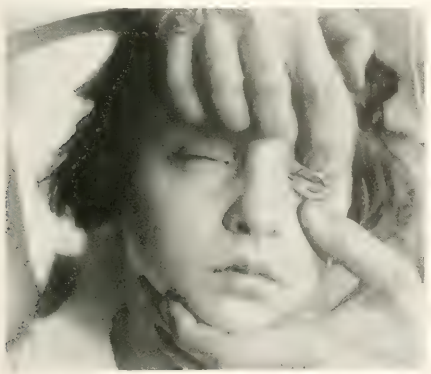


Fig. 2. Eye showing moderate development of trachoma.

Trachoma is a disease of the eyes liable to cause marked impairment of vision if improperly treated or neglected and, therefore, to entrust its care, without supervision by experts, to physicians in general practice, with little or no special knowledge or experience in diseases of the eye, is to risk permanent blindness in some of these children. The best is none too good for any child, and we should hesitate to inflict upon the child of the tenements a course of treatment by medical inspectors which we would refuse to tolerate for our own child.

In conclusion, let me say that these children's eye clinics of the New York City Department of Health have abundantly demonstrated their usefulness in controlling the spread of trachoma and in stamping out other contagious eye diseases in school children. The part of the work of the clinics in testing eyesight has not been touched upon in this article, but the removal of retardation in school from refractive errors has been an equally brilliant success of our bureau of child hygiene.

PUBLICITY IN HOSPITAL MATTERS

Do Not Seek to Hide What Needs to Be Cured—Newspapers May Be Your Strongest Allies

"Many hospital superintendents have jeopardized the support of their institutions by not according proper consideration to the newspaper representatives, seemingly trying to cover up things that the public should know," says Dr. M. Hotchkiss, writing of "The State Hospital—Its Purposes, Limitations, and Handicaps," in a recent number of the *Illinois Medical Journal*. "If there is a sore spot in your institution, the best way to do is to let the facts be known, if it is to be remedied. Go to your legislatures with *demands* for assistance; then, if it is not given, the blame is shifted, and one should feel at liberty and consider it a duty to give the public knowledge of the lack of assistance or help that should have been given. . . . Take your newspaper man to the worst of your place and tell him what you need to overcome the conditions, and nine times out of ten he will be only too anxious to help you out through the columns of his paper; but if you try to hide or cover up a condition that you are not proud of and the information is obtained from some disgruntled, discharged employee, the management is discredited. Show up the undesirable features of your institution, if you are not to blame for them yourself, and you will be able to remedy the condition by so doing. Give the public a chance to know of things directly from headquarters, and not through garbled statements. Ninety-eight percent of the adverse criticism of state institutions is due to ignorance, and it is sad to relate that less than two percent of commendation is given to balance the account."

MEDICINE AND METRICS

Saving of Time by the Use of a Decimal Basis for the Writing of Prescriptions—Danger in Hastily Written Apothecaries' Symbols—Death in the Minim Sign

By H. V. ARNY, New York, Chairman of the Metric Committee, American Chemical Society; Chairman of the Committee on Publicity, American Metric Association; Member of the Committee on Revision of the United States Pharmacopeia, 1910-1920

IT is unnecessary to speak to the medical profession about "the metric advance." In American medicine, as in American pharmacy and in American chemistry, the metric system has already arrived. In 1880 the metric spirit was strong enough in American medicine and pharmacy to induce the committee intrusted with the sixth edition of the United States Pharmacopeia to use, instead of the archaic apothecary weights, a compromise measure known as "parts of weights," this being placed on a decimal basis. In the seventh revision of the Pharmacopeia (U. S. P., 1890) metric weights and measures were used *in toto*, and, as the two subsequent editions are metric in character, we have had almost thirty years of metrics in medicine and pharmacy.

If metric units are not used today in prescription writing, the leaders of medicine and pharmacy are not to blame. The cause of the use of nonmetric units is rather to be sought in the inertia of the mass of practicing physicians, which leads them to stick to old customs rather than to learn new things.

Is it more convenient to write prescriptions in metric or in the ordinary U. S. units? That depends entirely on whether the prescription writer uses strictly metric doses and adjusts them to a decimal basis, or whether he sticks to the old doses in ordinary weights and measures, transposes them into metric equivalents, and then designs his prescription on a nondecimal scale.

Let us take up this phase of the question with genuine prescriptions before us. Herewith are presented four typical prescriptions: two (in metric quantities) written by a Hungarian physician (Fig. 1), one (in metric units) written by a German-American doctor, and one (in U. S. units) written by a physician of New York.

To compare these four is not easy, since it is obvious that the only fair comparison will be by studying the identical prescription in both systems, and therefore I have furnished under each a transposition of the prescription into the terms of the other system.

The first duty of a pharmacist, on receiving these prescriptions, would be to calculate the dosage of the last three pairs, the first pair, calling for a gargle, with no assigned dose, not coming within the scope of our present task.

Studying the second pair of prescriptions (Nos. 3 and 4), we are confronted by that interesting and perplexing problem, "What is a drop?" Un-

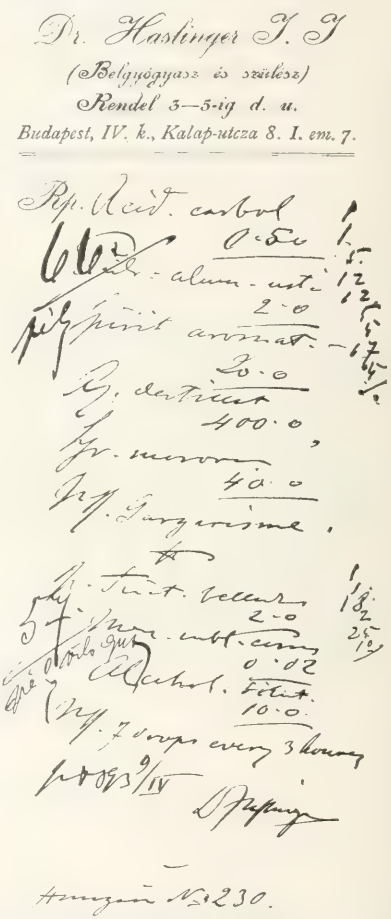


Fig. 1. Two Hungarian prescriptions (Prescriptions 1 and 3). Transposed into terms of ordinary American prescriptions, they would read:

Prescription 2.

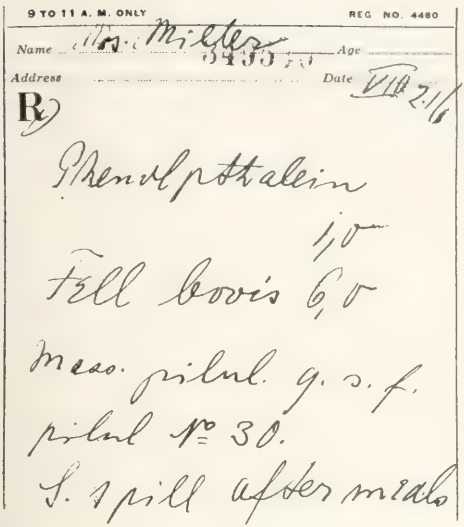
Phenol	8 grains
Exsiccated alum	30 grains
Aromatic spirit	4 drams
Distilled water	14 ounces
Syrup of mulberries (or other flavor)	1 ounce

Mix. Use as a gargle.

Prescription 4.

Tincture of belladonna	40 minims
Corrosive mercuric chlorid	½ grain
Diluted alcohol, enough to make	½ ounce

Dose: 7 drops every three hours.


9 TO 11 A. M. ONLY REG. NO. 4480

Name Mrs. Miller Age

Address Date VIII 2/16

℞

Phenolphthalein 1/0

Tell Bovis 6,0

Meas. pilul. q. s. f.

pilul № 30.

S. 1 pill after meals

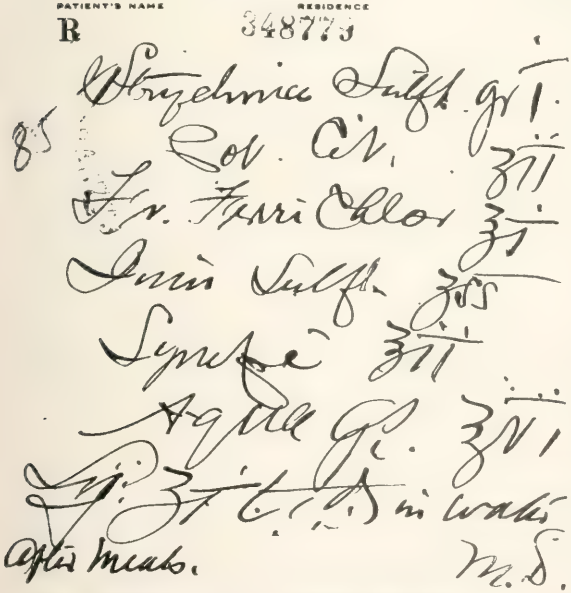
Fig. 2. American metric prescription (Prescription 5). Recasting into ordinary U. S. units, this will be:

Prescription 6

Phenolphthalein	15 grains
Ox gall	1½ drams

Make 30 pills.

Dose: 1 pill after meals.


PATIENT'S NAME RESIDENCE

℞ 348773

Strychnica Sulph. gr. 1.

Sol. Cit. ℥ii

Tr. Ferri Chlor ℥ss

Quin. Sulph. ℈ss

Syrupi ℥ii

Aquae q.s. ad ℥viii

M. Sig. ℥i t.i.d. in water after meals.

M. D.

Fig. 3. Prescription of a New York physician (Prescription 7). Re-written as a metric recipe, this is:

Prescription 8.

Strychnin sulphate	0.07 gm.
Potassium citrate	9.00 gm.
Tincture of ferric chlorid	33.00 mils.
Quinin sulphate	2.00 gm.
Syrup	65.00 mils.
Water, enough to make	200.00 mils.

Dose: teaspoonful three times a day.

doubtedly the prescriber considered 7 drops as one-half mil. and based his quantities of the tincture of belladonna and the mercuric chloride on the hypothesis of twenty-five doses in the finished mixture. Since, however, according to Remington's "Practice of Pharmacy," there are 137 drops in a fluidram of the two fluids prescribed (the tincture and the diluted alcohol), the two prescriptions really call for about seventy-five 7-drop doses. Taking, however, twenty-five doses as more closely agreeing with the prescriber's intention, we find that the metric dosage is

Tincture of belladonna.....2.00÷25=0.08 mils.
Mercuric chloride .....0.02÷25=0.0008 gm.

The U. S. dosage of Prescription 4 is

Tincture of belladonna..40÷25=$^{40}/_{25}$ or 1$^{3}/_{5}$ minims
Murcuric chloride.....⅓÷25=$^{1}/_{75}$ grain

If the more accurate idea of seventy-five doses is accepted, then the real dosage will be one-third of the quantities given above.

Now for the phenolphthalein-oxgall prescriptions (Nos. 5 and 6). The dosage calculation of No. 5 is

Phenolphthalein .....1.000÷30=0.033 gm.
Oxgall.....6.000÷30=0.200 gm.

On the other hand, the calculation of No. 6 requires the following figures:

Phenolphthalein .....15÷30=½ grain
Oxgall .....1½×60=90. 90÷30= 3 grains

In figuring out the dosage of Prescription 7, we must know that 6 fluidounces mean 6×8, or 48 teaspoonfuls. Then we will find the dosage is

Strychnine sulphate .....1÷48=$^{1}/_{48}$ grain
Potassium citrate
2×60=120 grains. 120÷48=2½ grains
Tincture of ferric chloride
1 ounce=480 minims. 480÷48=10 minims
Quinine sulphate
½ dram=30 grains. 30÷48=$^{30}/_{48}$ or ⅝ grain

As to Prescription 8, a metric practitioner would not be apt to transcribe No. 7 as a 6-ounce (180-mil.) mixture, but would write it as we do, in terms of a 200-mil. (50-teaspoonful) mixture, in which case the dosage of the active ingredients would be:

Strychnine sulphate .....0.07÷50=0.0014 gm.
Potassium citrate.....9.00÷50=0.18 gm.
Tincture of ferric chloride...33.00÷50=0.66 mils.
Quinine sulphate .....2.00÷50=0.04 gm.

If the critical reader will sit down and time his calculation of the foregoing doses, he will be apt to find that, as written, the metric prescriptions given above offer but little advantage as time-savers over those written in nonmetric units. This is due to the fact that none of the original prescriptions were written on a strictly decimal basis. Moreover, the one directing 7-drop doses, for reasons stated above, defies accurate calculation of dosage.

Let us, therefore, see how these prescriptions should be written to make them truly decimal. Turning to the ninth edition of the United States Pharmacopeia, we find the following average doses given for the active drugs ordered in the prescriptions cited above:

	Old units	Metric units
Phenolphthalein	2½ grains	0.10 gm.
Extract of oxgall.....	1½ grains	0.10 gm.
(Representing oxgall..12	grains	0.80 gm.)
Strychnine sulphate ...	1/40 grain	0.0015 gm.
Potassium citrate 15	grains	1.00 gm.
Tincture of ferric chloride..... 8	minims	0.5 mil.
Quinine sulphate.....	1½ grains	0.10 gm.
Tincture of belladonna 12	minims	0.75 mil.
Corrosive mercuric chloride	1/120 grain	0.003 gm.

In Prescription 3 the misleading 7-drop dose should be raised to the more accurate teaspoonful dose, and the amounts of tincture of belladonna and of mercuric chloride prescribed in a single dose should be 0.1 mil. and 0.001 gm., respectively. Then, if twenty-five doses are desired, we would get a prescription reading:

Tincture of belladonna.....	2|50 mils.
Corrosive mercuric chloride.....	0|025 gm.
Aromatic elixir, enough to make....100|00	mils.

In Prescription 5, while the single dose of oxgall (0.5 gm.) is satisfactory, the single dose of phenolphthalein should be 0.05 gm. when the amended prescription would read:

Phenolphthalein .....1|50	gm.
Oxgall .....6|00	gm.
Make 30 pills.	

Prescription 8 can be made more simple by changing the quantities of potassium citrate and of tincture of ferric chloride to 10 gm. and 25 mils., respectively, thus writing the prescription as follows:

Strychnine sulphate ..... 0|07	gm.
Potassium citrate .....10|00	gm.
Tincture of ferric chloride.....25|00	mils.
Quinine sulphate ..... 2|00	gm.
Syrup .....65|00	mils.
Water, enough to make.....200|00	mils.
Dose: One teaspoonful three times a day.	

To avoid uncertainty of dosage due to the varying size of domestic teaspoonfuls, the physician should insist on the use of a medicine glass graduated to teaspoonfuls of exactly 4 mils. each.

When adjusted to a decimal basis as planned by the originators of the system, metric units are as superior to our old weights and measures as our decimal currency is superior to the pounds, shillings, and pence which our English cousins are now planning to place on a decimal basis.

A striking feature of the time-saving qualities of the metric system is that presented in the March number of the *Science Monthly* (page 202), in which is reported an actual test made on two classes of third-year university students in calculating ordinary commercial transactions—one set being in metric units and the other being exactly the same problems expressed in the old system of weights and measures. In the first test six metric problems were done by fourteen students in 171 minutes with 68 percent correct, while the six identical problems in old units took the fourteen students 227 minutes with only 62 percent correct. In the second test seven metric problems were done by sixteen students in 360 minutes with 72 percent correct, while the seven identical problems in old units took the sixteen students 579 minutes with only 65 percent correct. In short, a task taking the entire thirty students 531 minutes to work in metric units required 805 minutes when proposed in the old system of units.

Still more serious from the medical point of view is the danger arising from the use of the old system of weights and measures in writing prescriptions. There is no druggist of any experience who has not wondered more than once whether a quantity symbol written by a physician meant the ounce (℥) or the dram (ʒ). That there is danger lurking in the minim sign (♏) was shown by a fatality that occurred in a south-

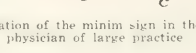


Fig. 4. Transformation of the minim sign in the handwriting of a physician of large practice

ern city some thirty years since. A physician of large practice and curious chirography gradually changed the writing of this minim sign as shown in Fig. 4. A certain prescription of his, reading as shown in Fig. 5, was taken to a druggist, who read it as "tincture of aconite, *6 drams*, water enough to make one ounce." The patient died, and the druggist was convicted of involuntary manslaughter, was ruined in business in consequence, and finally committed suicide.

It might be immediately pointed out that, if metric quantities are employed, a flyspeck or other unintentional spot might be mistaken for the decimal point. This danger is eliminated by some practitioners by the use of a comma instead of a period as a sign of the decimal point (see Prescription 5). Equally effective is the use of a prescription blank ruled with a vertical line, as shown in the prescriptions printed above, in which it will also be noted that the word "mil." is used to express what we have hitherto called the cubic centimeter. This is following the precedents established by the 1914 edition of the British Pharmacopeia and by the new ninth revision of the United

States Pharmacopeia. The change was made because of the findings of the Bureau of Standards that the cube of one centimeter varies a trifle from the thousandth part of the standard liter. Hence, according to the officials of the bureau, a milliliter (abbreviated "mil.") is a more exact and is also a simpler term than is the cubic centimeter.

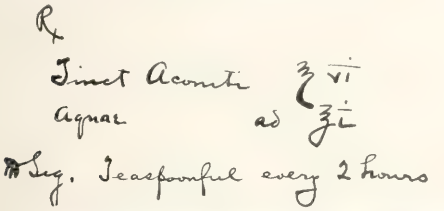


Fig. 5. A prescription which killed a patient and caused the druggist's suicide. What happened to the doctor who wrote the prescription the story does not tell.

As stated in the opening paragraph, it is scarcely necessary to use the phrase "the metric advance" as far as the medical profession is concerned, except possibly in urging all medical teachers to emphasize metric rather than old-style doses. As American medicine has largely adopted the metric system, it will be gratifying to the members of the profession to learn that metrics are making a distinct advance in other callings. Nothing in late years has shown this more clearly than did the Metric Conference held in New York City last December, on which occasion delegates from engineering, chemical, and pharmaceutical associations, and from such business organizations as the National Wholesale Grocers' Association, the Philadelphia Commercial Museum, and the Philadelphia Bourse founded the American Metric Association.

The association has provided three classes of membership: individual members, with dues of not less than $2 a year; firms, with dues of not less than $5 a year; and associations, with dues of not less than $10 a year.

The object of the American Metric Association is to conduct a campaign of education as a prelude to a campaign of legislation toward the placing of our 110,000,000 people on a commercial and scientific parity with the 437,000,000 people now using the metric system.

THE JAMES J. GRAY CLINIC IN ATLANTA, GA.

New Out-Patient Building of Medical Department of Emory University—Twelve Specialties Provided for Under One Roof—Three-Fourths of the Twenty-Five Thousand Patients Are Negroes

By C. C. HINTON, M. D., Chief of Clinics and Associate in Medicine, Atlanta Medical College, and H. F. HENTZ, Architect, Atlanta

AMONG the first needs of the medical department recognized by the trustees of Emory University, after taking over the Atlanta Medical College, was a separate and adequate building for the dispensary. Up to the present time, owing to lack of space and money, the dispensary quarters have been located in the basement of the main college building and in a few rooms that were available on higher floors of this building. The construction of the two new medical buildings on the university campus for the accommodation of the first two years in medicine opened the way for the utilization of the ground now in possession of the school in a more advantageous manner, and a gift of $50,000 from Mr. James J. Gray, Jr., of Rockdale, Tenn., provided the greater part of the necessary funds for the construction of the out-patient clinic building. The building (Fig. 1) is now approaching completion, and should be ready to be opened for use about April 1, this year.

This building is located on Armstrong Street, just in the rear of the main building of the medical school, which faces on Butler Street, directly opposite the city hospital, and within a quarter of a mile of the population center of the city. It will be connected with the main building by a closed corridor. The rear of the dispensary building is within about one hundred and sixty feet of the future teaching hospital of the school, the plans of which are in the hands of contractors at present. This will also be connected with the dispensary by a closed corridor.

The James J. Gray Clinic building, the floor plans of which are shown in the accompanying article by Mr. H. F. Hentz, of Hentz, Reid & Adler, architects, consists of a basement and four floors. Only the basement and the first two floors are to be used as examination and treatment rooms. The northeast end of the basement (Fig. 2) is entirely above ground, and the natural lighting is quite good. At this end are the rooms for pediatrics and orthopedics, including the orthopedic workshop and gymnasium. At the opposite end of the basement is the x-ray department. The central and anterior central portions of the basement are arranged as storage-rooms for drugs and for the dispensary records, the latter

being connected with the receiving office above by a stair and a small hand lift for the rapid handling of histories during dispensary hours. At the middle of the posterior central part of the building is the elevator shaft with the stairway winding around it.

The only street entrance leads to the first floor (Fig. 3). This opens into a vestibule, to the right of which is a second door opening into the reception-room for patients. The door on the left of the vestibule is a one-way door which, as it cannot be opened from the outside, forces the patients to enter in the proper direction. A brass rail in the reception-room prevents patients entering the main waiting-room without passing the record clerk and chief of clinics for registration and instruction. The main office is in the anterior central part of this floor, so that all parts of it

Fig. 1. James J. Gray Clinic, Emory University, Atlanta, Ga.

can be under the observation of the chief. The southwest end of this floor is devoted to surgery. There are separate rooms for dressing for both sexes and colors (white and negro) and a small operating-room for minor surgery and also the nurses' work-room and general sterilizing and supply-rooms. Additional supply-rooms are found on each floor. The east corner is occupied by five medical examining-rooms and a small clinical laboratory. Both surgery and medicine are grouped about inner corridors which can be used for history-taking. About the north corner are grouped the social-service office, a locker-room for the staff and the pharmacy, the last being directly to the right of the exit passage and on the opposite side of the admitting office from the reception-room so that the incoming and outgoing patients do not interfere with each other. Separate prescription windows are conducted for white and for negro patients. On the stair landing from this floor, behind the elevator shaft, is the door to the hospital corridor.

On the second floor (Fig. 4) are the rooms for the specialties not provided for in the basement. About the south corner are grouped dermatology and genito-urinary diseases with their own laboratory. The west corner is occupied by a small operating-room to be shared by genito-urinary and gynecology, the two clinics always occurring at different periods. The gynecology and obstetrics rooms connect with the operating-room by

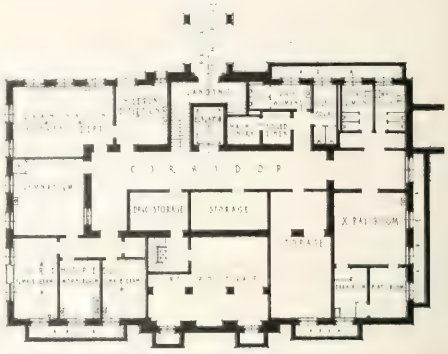


Fig. 2. Basement floor of James J. Gray Clinic, containing pediatric, orthopedic, and x-ray departments.

an inner corridor. The north quarter of this floor is occupied by ophthalmology and the east corner by otorhinolaryngology, the two clinics having a small operating-room between them. On the southeast and side between the corner and the elevator is the neurological clinic.

The third floor (Fig. 5) is to be used entirely

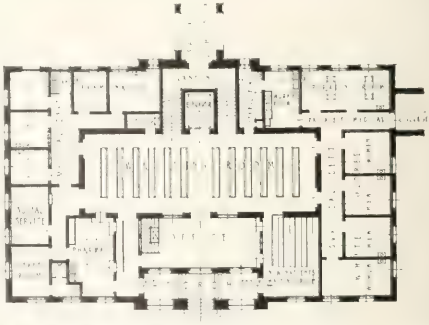


Fig. 3. First floor of James J. Gray Clinic, containing reception room, surgical department, medical examining rooms, etc.

as a dormitory for the interns of the future hospital and the senior students who are on duty for out-patient obstetrical calls.

The fourth floor (Fig. 6) is only a partial floor, consisting of a paddock for laboratory animals, an operating-room, a sterilizing-room, and the fan rooms.

The building has a very generous supply of windows and a large light-well extending down

to the first floor. Ventilation is by a fan system from the roof. Complete wiring is installed for a telephone system to all of the rooms.

The activities of the dispensary are divided into twelve departments: medicine, pediatrics, neurology, gastro-enterology and dermatology; surgery, gynecology, obstetrics, ophthalmology, otorhinolaryngology, orthopedics, and genito-

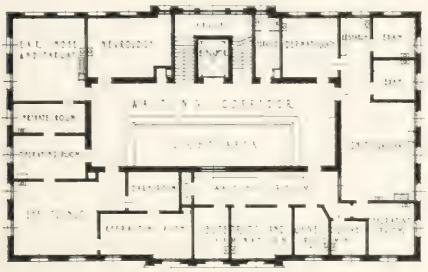


Fig. 4. Second floor of James J. Gray Clinic, containing dermatological, genitourinary, gynecological, obstetrical, otorhinolaryngological, and neurological departments.

urinary and venereal diseases. Besides these, there are the x-ray and cardiograph stations. The staff consists of 65 doctors, distributed as follows: medicine 10, pediatrics 5, neurology 4, gastro-enterology 1, dermatology 2; surgery 16, gynecology 6, obstetrics 3, ophthalmology 4, otorhinolaryngology 4, orthopedics 2, genito-urinary 8. All members of the staff are active teachers in

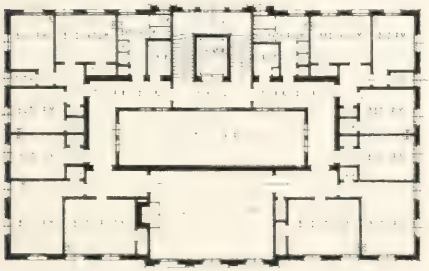


Fig. 5. Third (dormitory) floor of James J. Gray Clinic.

the medical school. The chief of the clinics holds a part-time salaried position at present. The pharmacist, record clerk, and two nurses have full-time positions.

The attendance of patients is over twenty-five thousand a year, of whom over six thousand are new admissions. About 25 percent of the patients are white.

CONSTRUCTION

The building is of reinforced concrete floor construction on brick bearing walls. The exterior is of vitreous brick laid in Flemish bond, with trim and cornice of Indiana limestone. Each room (and each series of rooms) is ventilated by means of an exhaust fan, installed in a pent-house on the roof. The heating and plumbing pipes are run in chases cut in the wall, so that no pipes will be evident except as they are in direct connection with fixtures.

The floors, with the exception of those in operating-rooms, which are of white ceramic tile, and the office and dormitory floors, which are of rift yellow pine, are of cement, with an approved hardener used in the finished surface. All trim for doors throughout is of pressed steel. A sanitary base of pressed steel is installed throughout, except on the dormitory floors. The walls are of hard-finish plaster, painted with several coats of

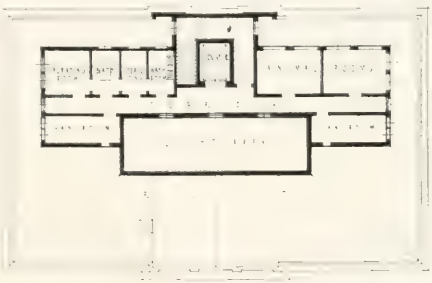


Fig. 6. Fourth floor of James J. Gray Clinic, containing animal room, etc.

oil paint; all doors are of birch, unpaneled. Each department is equipped with electricity for lighting and both electricity and gas for the equipment.

The entire plant, when completed, will consist of the present medical college building connected by passage-ways to both the out-patient building and the hospital, and these two in turn connected to the nurses' home. An inside court or garden is thus provided, which will serve not only as a valuable air space between the buildings, but also as a recreation ground for the interns, nurses, and convalescent patients.

Bequests of $5,000 to the Episcopal Hospital and $1,000 each to the Samaritan Hospital, Philadelphia Home for Incurables, Children's Hospital, and Sheltering Arms Hospital, all of Philadelphia, are included in the will of the late Harriet Shaw, of that city, recently probated.

Plans have been filed with the New York City Building Bureau for the Carson C. Peck Memorial Hospital to be erected in Brooklyn at a cost of $240,000. The hospital will consist of a five-story main building, 180x41, with a separate structure for power plant, garage, etc. Mrs. Clara C. Peck, of Shrewsbury, N. J., is responsible for the new institution, it being her desire to establish a memorial to her husband, Carson C. Peck, who died in April, 1915.

STANDARDIZATION OF HOSPITALS—CLASSES II AND III, SEMIPUBLIC INSTITUTIONS

Hospitals Conducted by Boards of Trustees Elected by Subscribers and Associations, But Not Answerable to the Tax-Paying Public—High-Class Institutions With Rigid Requirements—Schedule for Marking—Details of Plan

By JOHN A. HORNSBY, M. D., Chicago, in Collaboration with MISS MARY WHEELER, Principal of the Illinois Training School, Chicago; DR. SOLOMON STROUSE, Former Pathologist in and now Member of the Medical Staff, Michael Reese Hospital, Chicago; MISS RENA S. ECKMAN, Former Dietitian, Massachusetts General Hospital, now of Teachers College, Columbia University, New York; DR. J. T. CASE, Roentgenologist, Battle Creek, Mich.; DR. EDWARD S. BLAINE, Roentgenologist, Cook County Hospital, Chicago; MR. E. C. LARSON, Former Accountant, now Assistant Superintendent, Michael Reese Hospital, Chicago; MR. MICHAEL M. DAVIS, Jr., Director, Boston Dispensary, Boston, Mass.

A SEMIPUBLIC hospital is one conducted by a board of trustees elected by those who subscribe to the funds, and supported by private subscriptions and endowments and out of earnings from patients. These hospitals are usually controlled by enterprising and philanthropic citizens, in their private capacity, and are among the best institutions in this country. They usually have a considerable proportion of their accommodations devoted to private paying patients, and when well conducted they set apart a specific number of beds for free patients whose care is provided for out of funds specially appropriated for the purpose or out of surpluses after the ordinary running expenses are met.

The time has arrived in this hospital era when we are required to recognize some definite, fundamental business principles in the policies, purposes, and administration of our hospitals, and one of the most important factors in this recognition has to do with the care of free patients and the appropriations for that purpose. It is definitely understood that, in the semipublic hospital, supported by private funds and by endowments created by private gifts and bequests, the legitimate expenses of administration must first be met before charity, in the shape of free patients, is offered, and that the amount of this charity and the number of these free patients must depend entirely upon the amount of money left over after everyday charges of the institution are provided.

This month these semipublic hospitals are before us for consideration as Class II, meaning institutions of 250 beds or more; but there is no particular difference between the larger and the medium-sized hospitals of this class so far as their scientific and physical requirements are concerned except a difference of degree; hence we may suitably undertake to standardize the next class at the same time, that is, Class III, semipublic general hospitals, of 100 beds and up to 250.

It must be understood, of course, that we cannot expect that same elaborateness of architecture, installation, equipment and administration for the smaller institutions of this class that we have a right to expect of the larger. And in a final analysis there is not a great deal of difference between hospitals of this class and those institutions that we discussed last month; that is, the university or teaching hospitals, because today very many of these semipublic hospitals are also affiliated, either directly or indirectly, intimately or remotely, with medical schools, and whether this is so or not, there must be a training school in each of these institutions, staffs of medical men, interns, and a supporting public to be educated and trained along various lines, and, therefore, these institutions cannot escape the imperative necessity to consider themselves also as teaching institutions. The difference is that in Class I, the university hospitals, teaching is one of the primary purposes in the hospital, and all the facilities and equipment of the institution must be predicated on the attendance and training of undergraduate medical students. In the semipublic hospitals the attendance of students is usually merely an incident, where it is practiced at all, and it is not necessary to have large assembly rooms, laboratories of large areas, and the other essentials to teaching considerable groups of people, although even in this respect there is not so great a difference between the two classes of institutions as there was a time back, for the reason that medical faculties are finding it easier and better in every way to teach students in small groups rather than in large class bodies.

One main difference between the university and the semipublic hospital is that the heads of departments in the latter are not necessarily trained teachers, and these hospitals should not be demerited if their heads of departments are men and women who, though trained in their work, have not the gift or faculty of imparting information to others.

The schedule of marking which we presented last month for the university hospital will be continued throughout our classification because the items will be the same throughout and the same

allowances for the various departments can be considered quite the same throughout the whole of our standardization scheme and in all the classes of hospitals.

There is one essential difference between these semipublic hospitals and the university or teaching institutions, and that is that in the school hospitals we must mark the institutions on the basis of the dual purpose that the institutions are supposed to serve. To illustrate, a university hospital which had a good x-ray department in very small quarters, not large enough to admit groups of medical students, and at the head of the department a most excellent roentgenologist or operator who could not teach his branch of medicine, would be set low down in the marking; while precisely the same equipment and the same service in a semipublic hospital could well be marked high because the sole purpose of the department in the semipublic hospital is to make good x-ray plates and good fluoroscopic examinations and give deep treatments, under the orders of the patient's physician. The same factors must be considered in all the departments when we are making a survey of the semipublic hospital for standardization purposes.

It goes without saying that the hundred-bed semipublic hospital will not be forgiven if it is not equipped to do all the scientific work that may be expected of the large institution. In other words, the x-ray department of a hundred-bed hospital must be able to give to its medical men just as good kidney and gall-bladder and head plates, and roentgenograms of soft tissues, make just as good fluoroscopic examinations for diagnostic purposes, and be able to do just as good treatment work, especially in the deep pelvis, as the larger institution. If it is not equipped to give this service, it must be marked down accordingly.

According to our view of it, the chief purpose of the standardization of hospitals is to show trustees, financial supporters, and those in authority over hospitals, just how far their individual institutions measure up to what may be expected of the best in that class; and one of the best results of this scheme of standardization will be to encourage trustees and financial supporters of hospitals to improve their architecture, equipment, and administration wherever they are shown to be weak. And we also feel that the scheme of standardization is to have its best results in the form of what we might call introspection; that is, the survey and marking of the institution by its own people. In the course of time, when this internal or self-examination has proceeded sufficiently far, we may then think about an evaluation of the hospitals by some authoritative body acting for the hospitals as a whole or acting on behalf of the public in the hospitals as a whole. This work was undertaken largely because of the hundreds—even thousands—of inquiries that have been constantly coming to THE MODERN HOSPITAL from administrators, trustees, and financial supporters of hospitals who wanted information concerning what might be expected of some particular institution in which they were interested.

We now follow with what we conceive to be a fair itemized schedule for the marking of a semipublic hospital of 100 beds or over, to cover Classes II and III:

MEDICAL STAFF:				
Total percentage allowed, 40 percent.	20 percent.	Attendants:		
		Personnel of staff	.....	.....
		Completeness of the scheme of organization	.....	.....
		Responsibility of the staff heads	.....	.....
		Simplicity of the organization	.....	.....
		Team-work, including coordination with administrative departments	.....	.....
		Original work, investigation, and publications	.....	.....
	5 percent.	House staff:		
		Personnel	.....	.....
		Plan of organization	.....	.....
		Discipline	.....	.....
		Team-work	.....	.....
		Number of interns per patient	.....	.....
	15 percent.	Training school:		
		Personnel of heads	.....	.....
		Personnel of pupils	.....	.....
		Preliminary requirements	.....	.....
		The curriculum	.....	.....
		The discipline	.....	.....
		Physical equipment, home, class rooms, apparatus, etc.	.....	.....
LABORATORIES:				
Total percentage allowed, 10 percent.		Comprehensiveness of scheme of organization	.....	.....
		Personnel of director and associates	.....	.....
		The scientific atmosphere of hospital under inspiration of laboratories	.....	.....
		Physical equipment	.....	.....
		Architectural arrangement of space	.....	.....
		Original work and publications	.....	.....

X-Ray Department:			
Total percentage allowed, 5 percent.	Comprehensiveness of the organization	.....	.....
	Personnel—director and associates	.....	.....
	Architectural arrangement of space	.....	.....
	Equipment	.....	.....
	Character of work done	.....	.....
Dietetic Department:			
Total percentage allowed, 5 percent.	Scope of work	.....	.....
	Personnel—director and associates	.....	.....
	The general kitchen	.....	.....
	The diet kitchen	.....	.....
	Ward diet kitchens	.....	.....
	Serving rooms	.....	.....
	Dining rooms	.....	.....
	Menu plans	.....	.....
	Team-work with other departments	.....	.....
Pharmacy:			
Total percentage allowed, 5 percent.	Plan of the organization	.....	.....
	Personnel—director and associates	.....	.....
	Plan of distribution of medicines	.....	.....
	Architectural arrangement, main drug rooms, floor cabinets, and scheme of transportation	.....	.....
Dispensary, Out-Patient, and Social Service:			
Total percentage allowed, 5 percent.	Scope of work	.....	.....
	Personnel—medical staff, director, and associates	.....	.....
	Record-keeping system	.....	.....
	Team-work with other departments	.....	.....
	Architectural arrangement of space	.....	.....
	Management and discipline	.....	.....
Medical Records and Accounting:			
Total percentage allowed, 10 percent, divided between records and accounting.	Comprehensiveness of plan as a whole	.....	.....
	Completeness of plan of records for medical service	.....	.....
	Simplicity of accounting system	.....	.....
	Cohesion and cooperation between medical records and accounting system	.....	.....
	Value of medical records for purposes of statistics and literature	.....	.....
Architecture, Including All Permanent Installation, Such as Plumbing, Steam-Fitting, Power Plant, Elevators, Ventilation, Vacuum Cleaning, Laundry, Sewage, and Garbage Disposal:			
Total percentage allowed, 5 percent.	Plan of the hospital as a whole	.....	.....
	Execution of details	.....	.....
	Taste and harmony of parts—ornamentation	.....	.....
	Materials used in the building	.....	.....
	Materials employed in permanent installation	.....	.....
	Plans of arrangement of operating suite, kitchens and auxiliaries, laundry, etc.	.....	.....
	Economy of operation permissible	.....	.....
Equipment—Medical, Surgical, and Physical:			
Total percentage allowed, 5 percent.	Completeness of regular surgical apparatus and furnishings in operating and dressing rooms	.....	.....
	Special apparatus for doing unusual technical operations—splints, water and air beds, hoists, pulleys, extension apparatus; made-up boxes for special operations, such as venesection, spinal puncture, etc.	.....	.....
	The furniture of the hospital—all departments	.....	.....
Management:			
Total percentage allowed, 5 percent.	Scheme of organization, for cooperation of scientific with domestic departments	.....	.....
	Personnel—superintendent and department heads	.....	.....
	General scheme for handling the public	.....	.....
	General scheme for handling the staff	.....	.....
	General scheme for handling the patients	.....	.....
	General scheme for handling the trades people	.....	.....
	General scheme for handling the employees	.....	.....
	Arrangements for housing help necessary to be kept on premises	.....	.....
	Cleanliness and order in the hospital	.....	.....
	Training and discipline of the help	.....	.....

The future of mental hygiene work for public health nurses cannot be predicted. Dr. M. S. Gregory, Resident Alienist at Bellevue Hospital, sounded a significant note at the Mental Hygiene Congress in New York. He said, "Of course, certain forms of mental trouble should be treated in the state hospital. However, the more I think of the matter, and as my experience increases, the more I realize that for some classes of mental diseases hospital treatment may not be the best kind of treatment. These patients become, so to speak, institutionalized. The quiet and routine life of an institution tends to the development of unhealthy physical and mental habits, and as life in an institution is so different from the outside world, they are unable to adjust themselves after their discharge. It would be more logical and profitable to treat such patients under normal and natural surroundings at home. I think the old Scotch method, as well as that applied in Gheel, Belgium, with added intelligent social service supervision, is preferable to state hospital care in certain types of mental disease."—Mary S. Gardner, "Public Health Nursing."

GREAT MEETING TO STANDARDIZE HOSPITALS

American College of Surgeons Calls Meeting of Experts to Chicago to Plan Ten-Year Campaign for Which Vast Sum Is Provided

On October 19 and 20 there is to be held in Chicago a most important meeting of members of the American College of Surgeons to discuss methods for working out a scheme of standardization of the hospitals on this continent. Besides 350 Fellows of the college who will participate in this meeting, prominent people are to be invited from allied walks of life, medical men as distinct from surgeons, leaders in the nursing thought of the country, specialists in laboratory work and in roentgenology.

There is to be a two-day session, to be followed, on October 22, by the meeting of the Clinical Congress of Surgeons of North America.

At the hospital standardization meeting the subject is to be divided into three parts:

1. What is the status of the hospitals at the present time? This part of the subject will be treated by practical students in hospital work.

2. What is next to be done to make the hospitals efficient from the standpoint of modern medicine? This part of the subject is to be treated by clinicians working in the hospitals.

3. How is the work to be accomplished?

As a result of this meeting the American College is to begin a ten-year study of the problem of standardization, and it is contemplated that an expenditure of approximately $40,000 will be required the first year, and $500,000, contributed by Fellows of the college, is behind the investigation. It seems there is no question about plenty of money to make the study all that the best thinkers of the country can suggest.

This meeting is inspired by and will be held under the direction of Dr. John G. Bowman, director of the American College of Surgeons, and the meeting will be presided over by Dr. Franklin H. Martin, president of the General Medical Board of the Advisory Commission of the Council of National Defense, and general secretary of the American College of Surgeons.

STANDARDIZATION OF HOSPITAL MORBIDITY STATISTICS

Confusion in the Situation at Present—Need for a Federal Voluntary Registration Area—Tabulating the Data

Failure must be the result of any attempt to compare hospital results and community fatality rates for the same diseases and conditions, says E. W. Kopf, assistant statistician for the Metropolitan Life Insurance Company in the Public Health Reports of the United States Public Health Service for June 15, 1917. This is because of the lack of uniformity in hospital statistics. Even in different departments of the same hospital, different systems of nomenclature and tabulation may be employed. In the University Hospital of Philadelphia, for instance, it is impossible to determine the complete experience of the institution with respect to any disease; and similar conditions exist in other hospitals and other large cities of the United States. The result is that it is impossible to gauge with any degree of accuracy just what hospitals accomplish as a public health measure.

The proper preparation of hospital statistics, Mr. Kopf believes, is a necessary step toward the continuous and complete registration of all serious sickness as a public health measure. To this end he recommends the establishment of a Federal voluntary area. For this it would be necessary merely for a sufficient number of representative general and special hospitals (a) to adopt in common a nomenclature and classification, and (b) to transmit to a central Federal agency detailed tabulations of their sickness experience on a set of uniform reporting schedules.

The Bellevue and Allied Hospitals' nomenclature of diseases is the one at present most in favor for hospital use. Kopf suggests the construction of a standard manual for American hospitals, employing as a basis not only the Bellevue nomenclature, but also the forthcoming report of the United States Public Health Service Board of Nomenclature, the United States Public Health Service tentative nomenclature of diseases and conditions, and of parasites and parasitic diseases, the United States Navy classification of injuries, the nosologic system of the International Commission for the Unification of the Medical Statistics of Armies (Berlin agreement, 1907), the International Association of Industrial Accident Boards and Commissions' classification of injuries (by location, nature, and extent of injury and degree of disability), and the International List of Causes of Death as used by the Census Bureau, the United States Army, Massachusetts General Hospital, and Bellevue Hospital.

"The practical working of an approved system of nomenclature and classification in a group of representative hospitals," says Mr. Kopf, "will benefit the hospitals themselves by eliminating much of the present confusion over record filing and finding. Physicians trained in these hospitals will go into private and other practice with an adequate conception of the urgency of consistency in the use of medical terms. This will favorably affect the vital statistics prepared from the birth, death, and sickness reports by these physicians later on in general practice."

In scheduling the data, Mr. Kopf warns against failure through emphasis at the outset on relatively unimportant statistical detail. He suggests the use of a schedule plan which was eminently successful in England during the early 1860's. This successful English experiment recognizes seven "primary tabulation elements," as follows: (1) patients remaining in hospital on the first day of the year; (2) patients admitted during the year; (3) patients discharged as "recovered," "improved," or "relieved" during the year; (4) patients discharged as "incurable," "dying," "unrelieved," for irregularities, or at own request; (5) patients who have died during the year; (6) patients remaining in hospital on the last day of the year; (7) mean duration of cases in days and fractions of a day. Each of these "elements," Mr. Kopf says, could be presented as a table, duly classified in the stub or left-hand side of the table by disease or condition according to the accepted nomenclature, and by sex and age period in the box headings at the top of the table. Two copies of these primary tabulation schedules might be prepared by each hospital, one for transmission to the central Federal agency and the other for the preparation of the hospital's own report to its board of trustees or managers.

Such statistics, the author remarks, would afford, for the first time in America, some foundation for a comparative study of hospital results—the relative efficiency of the several types of general hospitals, of systems of nursing, and of modes of treatment. Such questions as the effect of an improvement in hospital results for pneumonia on the death rate and the effect of a decline in hospital puerperal sepsis, etc., on maternal mortality in the community can be answered only by the aid of statistics of general hospital experience.

The MODERN HOSPITAL

Editorial Office . . . . . Conway Building, Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd . . . . . Fidelity Building, Baltimore
Frederic A. Washburn . Mass. General Hospital, Boston
Winford H. Smith . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater . . . . Mt. Sinai Hospital, New York
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John A. Hornsby . . . . . Conway Building, Chicago

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The Hospitals Are Gravely Threatened

Two topics are coming up at the Cleveland convention of the American Hospital Association, either one of which would justify the attendance of all the hospital people in this country even if there were nothing else on the program. These problems are the following:

The prices of everything that hospitals use have gone up out of all reason, and unless something is done about it many commodities are going up to entirely prohibitive points. Up to the time that this country went into the war on the side of the allies, the United States was furnishing hospital products of every sort to the allies and to our own army in peace time, leaving barely enough, at extremely high prices, for our civilian hospitals. Now the demands of our war department in the creation and maintenance of a vast army are drawing on these sources of supply to a point where the very existence of the civilian hospitals is at stake. The government is utilizing every agency and every influence that it can command to provide for its armies, and in that provision nothing has as yet been done to guard or guarantee the continuance of supplies for the civil hospitals. A resolution will be introduced at the Cleveland meeting for the appointment of a committee that shall bear a petition to the government authorities at Washington appealing for the inclusion of the civil hospitals of the country in any control of commodities for the army and navy.

There is every reason to expect that such a petition will meet with a sympathetic reception in Washington, because the government has been asking civil hospitals to mobilize themselves and to prepare for all eventualities in the war. These hospitals have been drawn on for staff members, interns, and nurses, and the government is expecting that the hospitals will provide space for the care of sick and injured soldiers. If this is to be the case, it is reasonable to expect that the government will place the civil hospitals on the same plane with itself when it comes to commodities.

The other vital problem that will be presented at Cleveland is that concerning interns. The diminution in the number of medical schools during the past five years has brought the intern problem already to a critical stage; many hospitals are having to do without interns, and many others are being compelled to pay salaries out of all proportion to the service for the few men they are enabled to obtain. Now, then, the government comes along and calls many of these interns into the Medical Reserve Corps of the Army and is sending them abroad for service in the war, and thousands of others are being drafted in the great national army that is now being raised.

Great Britain took many hundreds of medical students out of the schools and sent them into her expeditionary army when the war broke out, and sent many hundreds of hospital interns into base hospitals and ambulance companies and to the front. Now Great Britain is suffering from a tremendous dearth of physicians, and the United States is just now asked to send three thousand qualified medical men to take care of the civil population of Great Britain because the men left behind constitute only one out of six thousand population; in this country we average one doctor to five hundred people.

It is understood the Surgeon-General of the Army realizes the shortsightedness of this policy and hopes to obviate the same conditions in this country; but, unless action is taken by the hospitals themselves, it is entirely probable that nothing will be done about it and that medical students will be drawn for the army and the hospitals depleted of their interns, and no provision made for this much-needed force in the civil hospitals of this country.

A resolution is to be offered in Cleveland providing for a committee to wait on the Surgeon-General of the Army and the Surgeon-General of the Navy and appeal for a change in the regulations so that medical students can continue with their school work and so that interns will not be

taken for the war, at least until the need is far greater than now.

If the President accedes to this appeal (for in the last analysis the President must make such change in the regulations) another regulation will have to be made providing for the acceptance in the Medical Reserve Corps of men over 55 years of age, as the figure now stands, in order that these older men may do the work back at home and release the younger members of the profession for the more active work at the front.

In past years, trustees and hospital superintendents have been entirely too indifferent about representation at the meetings of the American Hospital Association. Their best interests have suffered many times. The matter now concerns their very existence, and in self-defense every hospital in this country should send a representative to Cleveland to demand of the government proper protection for our civil institutions in the matter both of personnel and of purchasable commodities.

Hospitals to Standardize Themselves

This month we are publishing the schedule for the standardization of semipublic hospitals, large and medium-sized. Last month we had the university or teaching hospital; next month we shall have the small semipublic hospitals and community institutions.

A group of people well trained for the work have given mature consideration to a plan for arriving at some definite comparable standards for the hospitals of this country; hospitals have been classified, and these schedules are now in course of publication, and this publication will continue from month to month until every hospital in this country of every size and character has been included.

Now, what is to be done about the preliminary work? Are we to just look it over and forget it, or are we to apply it in our own institutions, each administrator and board of trustees within their own hospital? Certainly numbers of trustees and administrators ought to take this schedule and at least standardize or mark their own institutions, justly, rigidly, and conscientiously—not for publicity purposes, but in order that they may at least have the judgment of others as to the sufficiency of the work they are doing in their several departments. We have felt for a long time that the best effect of any scheme of standardization must come from an introspection by each hospital on its own account. If this is done in the right spirit, the standards of the hospitals of this country will be raised many fold and without the injection of any outside influences whatever.

In order that these schedules now in course of publication may be utilized to best advantage, we are this month changing somewhat the form in which they are presented and are providing columns in the published schedule for the markings.

We wish very much that the university or teaching hospitals would conscientiously mark themselves, using the schedule in our July number, and send us a copy of these markings with whatever comments they choose to make and whatever explanations their markings require. And we wish also that the large and medium-sized semipublic hospitals defined in this number would do the same for their institutions and send us a copy of the result, also with whatever explanations they may wish to make concerning the marks that they have given and with whatever details they wish to accompany these marks, as showing the basis upon which they have arrived at their conclusions.

If this is done we shall be able to help very materially in the work of standardization in the various hospitals and the discussion that must grow out of any such serious attempt to study our hospital problems must be of infinite benefit to all of them. The administrators of those hospitals that fall within the schedules that are published this month, or that were published last month, will confer a very great favor on all the hospitals if, just as soon as the September number reaches them, they will attend to this matter, mark their hospitals, and send us the copies of the sheets. These sheets will not be for publication, but for intensive study between the group undertaking this work and the hospitals in which the standardization is being done.

Another Feature of Wise Preparedness

We are beginning now in this country to think about wounds and disease in connection with the war. The offices of the War and Navy Departments have been thinking about these things for years, and it should be satisfying for the people to know that so much has been done in the way of preventive medicine as preparation for this great war that is upon us.

In the Mexican War six men died for every one who was killed. In the Crimean War France lost ten men for every one who was killed in battle. Our own Civil War made a record; only two men died from disease to every one who was killed. But during the Franco-Prussian War Germany made a record of another sort, losing twelve men by disease for every one who was killed. The Russo-Japanese War was the first war in history in which disease played a minor part as against

the tragedy of powder and shell, two men being killed for every one who died of disease.

But this great European war, so far as the United States is concerned, is to be epoch-making, and is to write new history in regard to the human salvage—if those who are responsible for our preparedness have anything to say about it.

We are now raising an army of approximately a million men. Not only are these men being selected carefully and by medical boards made up of the best material we have in the American medical profession, but other preparedness measures have been taken. Today all over this country the men subject to the draft and the men of the national guard, in course of transfer over to the federal service, are being examined not alone by the ordinary medical boards, made up in the ordinary way, but by corps of experts in almost every branch of medicine, who are sifting the men for the new national army to the finest mesh. There are tuberculosis experts, experts on heart diseases, eye, ear, nose, and throat men, and experts on genito-urinary diseases and other branches, all following up the work of the general medical boards and eliminating the weak and diseased and the incipient cases of disease even after the ordinary medical boards have accepted men for service. The new national army that goes to France, thanks to preventive medicine and astuteness and preparedness and the study of those in authority in the War and Navy Departments, will be the best body of men, physically, mentally, and morally, that has ever been turned out in uniform. What all this will mean cannot possibly be conceived by the ordinary mind at the present moment. It will certainly mean not only a far more efficient soldier body, capable of rendering a high order of service to the country, but also the saving of hundreds of millions—even billions—of dollars to the country in pensions that will not have to be paid because of this careful selection. Pensions are being paid for the Civil War in millions annually today; pensions are being paid even for the Mexican War that occurred away back in 1848, and pensions will be paid by the government for the war that we are now embarking on for the next seventy-five years. Who can say what it will mean in the saving of pensions that our trained officers of the fighting departments of the government have had the foresight to weed out and pick men free from any taint or suspicion of pronounced or even incipient disease?

While we are blaming Congress and our government for unpreparedness, let us make this exception: that the medical bureaus of the departments of war and the navy were vastly more than prepared; they were so far ahead of the unseeing and unrealizing public and the by no means well-informed Congress that their motives and their methods and their alertness are not even now realized.

Divided Authority in Hospital Administration

Two cities in this country are in the throes of an agitation concerning the administration of their big, fine city hospitals; one of these is Los Angeles, Cal., and the other Kansas City, Mo. In Los Angeles a new superintendent of charities has been appointed in the person of Mr. Norman R. Martin, who has announced that the Los Angeles County Hospital, with a capacity of 1,400 patients, is to have a dual management, the buying and management being under a business head and the medical work under a physician or group of physicians. In Kansas City the physical departments of the Kansas City General Hospital are to be under a business manager and the medical work is to be conducted under the auspices of a committee of physicians.

In both these instances the authorities who have instituted these new systems are untrained in hospital work and wholly inexperienced. Mr. Martin seems to be an ambitious, energetic business man whose training has consisted, according to his own report, of a zigzag trip across the state of California, during which he traveled about 8,000 miles. Mr. Martin came back home thoroughly imbued with the idea that a dual management was the ideal thing for a great public hospital. Of course, we don't know where he got his information, but we are quite sure that Mr. Martin will regret the step he is about to take. Dual management of hospitals has been a failure in this country always. Many of our best institutions have tried it and have come back again to the "one-man power" and one-man responsibility.

The Kansas City situation seems to be almost hopeless. The doctors there are quarreling among themselves; petty politicians are after the spoils, and this latest move seems to be almost a concession on the part of the doctors that the politicians are to have the physical management of the institution with all that implies in the way of purchasing and the employment of people, while the physicians are to take over the treatment of patients through their medical committee—which means nothing at all, because the business manager, having the purse strings and the approval of the hospital board, can do as he pleases and give to the physicians what he thinks they ought to have and nothing more.

It is obvious why dual management of a hospital is out of the question. The treatment of patients involves the purchase of equipment, changes

in architectural arrangement, sometimes the employment of trained people, and the institution of a scientific technic in the institution throughout. The business manager has no conception, as a rule, of the fundamental purposes for which the modern hospital is conducted and he, taking the average business manager that we know, about believes that his buying and his conservation of funds and his evaluation of employees are the primary things in the hospital's management. As a matter of fact, all these things are merely incidental to the care of the sick, and the doctors have charge of that. The business manager, not at all informed as to the value of a thing, is more than likely to refuse to buy an expensive piece of apparatus or equipment on the ground that the institution cannot afford it; he thereby makes a reputation for economy with his lay board of managers, usually themselves politicians. So the hospital goes without things that the doctors need. Eventually the doctors cease to struggle over this condition; the next step is that they cease to be interested in the hospital, the patients suffer, and the politicians wax fat.

It seems inconceivable that a nation of business people like this, and at a time when business methods and business systems are the vogue, should commit the care of their sick, especially their dependent sick, most of whom are ignorant and all of whom are more or less helpless, to the haphazard whims and fads of people who, however enthusiastic they may be, know absolutely nothing of the underlying principles involved in their newfound employment.

The Labor Turnover in Hospitals

In these days of war economy, when hospital executives are anxiously scanning their budgets for every possible clue to reduction in expenses, we have so far seen no discussion of one item which has an important bearing on the payroll. The labor budget, indeed, has probably been one of the first to receive rigorous pruning in most institutions, and many superintendents no doubt feel that, if they are not paying extravagant wages or allowing their employees to waste time, they have made all the savings possible in the labor department. Yet, even so, it may be worth while to look for a leak right there.

What is your labor turnover? In other words, what proportion of your employees do you "hire and fire" during the year? If the proportion is large, have you ever stopped to consider what it costs you? Employers in the general industrial field are just beginning to find out that "hiring and firing" is an expensive process. Among the elements of cost are the time of superiors taken up in instructing and supervising the green hand, increased wear and tear on implements, reduced amount of work during early period of employment, and increased amount of spoiled work by new employees. The cost of hiring a new factory hand has been placed at $35 as a minimum and $100 as a maximum.

In many cases it would doubtless be very difficult to estimate the cost of a high labor turnover in the hospital. Yet it would be rash to conclude that this cost is negligible. On the contrary, the success of a hospital, which depends on so many more intangible factors than that of an industrial establishment, may be endangered more than you realize by the rudeness, the indifference, or the stupidity of raw employees in low-grade positions. The indirect cost may far outbalance the direct cost, and the latter may be much higher than has been realized.

Mr. C. S. Rossy, psychiatrist at Sing Sing Prison, in an article published elsewhere in this issue, suggests that much of the high labor turnover in industry may be due to the employment of unsuspected high-grade morons. The suggestion may be worth heeding. Mr. Rossy has elsewhere[1] reported the finding of normal mentality in only 63 percent of the candidates for employment at the Boston Psychopathic Hospital. Since the lower grades of hospital employment are likely to be sought by failures in other walks of life, it would seem wise to exercise greater care, rather than less, in selecting employees for these positions.

Make Room for More Patients

At the outbreak of the European war, there were about 600,000 hospital beds in the United States and hardly any that were not needed. Many hospitals were crowded and some were compelled to turn patients away. During the last three years there has been a marked increase in the number of people going to hospitals for treatment in preference to remaining at home. It is true that many new hospitals have been opened and many existing hospitals enlarged, but the increased cost of building which has resulted from the war has checked this expansion to some extent. We know perfectly well that our hospitals are going to have to take immense numbers of sick people because of the war.

Medical men are being drawn on by thousands for war service, and, if our experience follows

[1] Rossy, C. S.: Yerkes-Bridges Point Scale as Applied to Candidates for employment at the Psychopathic Hospital. Boston Med. and Sur. Jour., 1916, CLXXV, No. 23; abstr. in The Modern Hospital, 1917, VIII, No. 1.

that of the European nations at war, the civilian medical profession is going to be depleted to such a point that every minute and hour and every visit must be saved if all the sick are to have proper care. American nurses are also being drawn on by thousands for war work, and the nursing field is being depleted to a point of even actual stress already. If this means anything, it means that vast numbers of the sick who have been kept in their homes heretofore must now be taken to hospitals where the time of doctors and nurses can be saved.

How are we to do this if all our hospital beds are full already? It seems to us the only way is for the hospitals to make extra room, and they can do this by removing well people from many of their hospital spaces. A hospital has no business, under any circumstances, to house well people, excepting interns. The superintendent should not be housed in a hospital, but should be permitted to live outside, where at least a small part of his time he may be free from the cares and anxieties and direct contact with the sick, and all other well people should live outside, for the same reason and for the additional reason that unoccupied well people about a hospital are a nuisance and are sure to get in mischief.

We have seen nurses' homes where housekeepers and dietitians and many other women assistants are housed, and this, too, in nurses' homes where there is not nearly room enough to house the number of nurses the institution needs. We have seen hospital units that were not yet "open" occupied by the help even while the rest of the hospital was crowded to overflowing.

A hospital today costs about 40 cents per cubic foot to build and equip. A private residence costs about 15 cents, and yet we are permitting well people, often the common help, to occupy space that costs 40 cents per cubic foot when they might well be housed in flat buildings or in private residence property. We can easily see that a seven-room flat, for instance, worth $3,000 or $4,000, could be made to house six or seven people, and such a flat could be rented for from $25 to $40 per month, whereas one private room in the hospital brings in an income of $25 per week and upward.

If necessary, even nurses' homes could be made available for patients at a pinch and the nurses moved into flat buildings and other inexpensive places not suitably arranged for the care of patients, but entirely suitable for living places and young women for a time.

Before this war is over it is entirely probable that wooden shacks and even canvas tents will have to be hurriedly constructed at many points to take care of the sick and hurt; we had better begin in a rational way before we are compelled to do so hurriedly and without adequate preparation.

The Buying Problem in War Time

Some months ago we had an editorial in these columns on "The Superintendent and the Salesman." That was followed a little later with another article on "The Salesman's Relations to the Institution and His Relations to His Home House." It seems now necessary to say something more on this general topic of salesmen who come in contact with the hospitals.

The war has called into active service under the colors many thousands of the most active and ambitious men in the country. Among these we can safely count the average salesman of merchandise, and so many of these men have gone to serve the country in the uniform that, without any question whatever, commercial houses are going to find themselves very short of traveling men until peace comes.

The hospitals have a duty to perform in this matter, and if they perform that duty they will get better goods and save themselves money. THE MODERN HOSPITAL has advised many large, staple commercial houses, handling hospital products, that the hospitals should and will be willing to transact as much of their business as possible by mail, and we fervently wish that this might come to pass. When a hospital is dealing with a house of good repute and proved integrity, that hospital should be entirely safe in buying from that house without the intervention of a traveling salesman, and we may say that most houses selling to the hospitals have made arrangements in their home offices to increase the efficiency of their people so that they may be enabled to attend to the wants of customers, especially institution customers, directly and by correspondence. In most of these houses, also, an arrangement has been effected with their salesmen by which the salesman who has been representing them in the hospitals may be credited with the sales that come in directly, although the salesman himself may be in France or on some other active service for the war.

Considering all these things, we very strongly advise the hospitals to continue their relations with the commercial houses that they have known and patronized for years, and to do their business by correspondence and by express and freight instead of relying on the personal intervention and personal attention even of a salesman whom they have long ago learned to lean upon and trust.

AMERICAN HOSPITAL ASSOCIATION MEETING AT CLEVELAND

Annual Conference of Hospital Workers Takes Place at Most Critical Period of Country's History—Hospitals Face Grave Responsibilities—The Program and High Lights of the City Itself

When the committee on time and place of the next meeting named Cleveland, Ohio, there was a reason. Cleveland is probably ahead of the rest of the country in social welfare and in the care of the public health. The organization known as the Cleveland Hospital Council, that splendid institution known as the Cooley Farm, and some of the most progressive ideals that have permeated and that have been set to work there are worth studying, and the committee felt that no wiser use could be made of the convention's spare hours than to learn new methods and get new inspiration from so progressive a center.

Cleveland has grown rapidly in the last decade, from a city of 300,000 ten or fifteen years ago to a city of a million people today, from a place down among mediocrity to one of the most commanding positions among American cities.

Cleveland has vast wealth, and, what is far more important, vast ambitions, and one who visits Cleveland for even a brief sojourn cannot help but be impressed with the fact that the spirit of Tom Johnson still hovers over the city and that the impetus, the ideals, and the social progress which center there were inspired by that same genius for social organization. Under Tom Johnson were trained the men in whose keeping the welfare of Cleveland now rests.

As we are now going to Cleveland we should have before us a brief summary of what we may be expected to find there, and we have tried to give our readers the benefit of this information.

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WAR LEADERS ON THE PROGRAM

Social Gaiety Prevented by Gravity of the Hour—Study of Local Welfare Work to Be Only Interruption in Epochal Gathering

Although President Wilson of the association has made up a splendid program for the Cleveland meeting, one full of meat and of the most vital problems of the hospital world at this epochal time, it has been announced that it may be necessary, in the interest of an even more timely discussion of some matters which are coming to a focus just at this moment, to change the program in some particulars for the inclusion of representatives of the Army, Navy, and Public Health services of the government and the Council of National Defense.

It is certain that we will have with us at that meeting representatives of those services, although General Gorgas, General Braisted, and General Blue may be so overwhelmed with the feverish work of war time that they may not be able to come in person. It is certain that we will have with us Dr. Franklin H. Martin, president of the General Medical Board and a member of the advisory commission of the Council of National Defense. Dr. Martin's board has achieved wonders in preparing the medical services of the country for war, and it may be safely stated that, however unprepared the Congress and the public are for the war, the medical services of the country are ready and are now fulfilling all that is asked of them. Thanks to Dr. Martin's initiative and his aggressive energy, more than ten thousand medical men are now available and many of them at work in every field. Dr. Martin will tell us something of the herculean task that confronted him and his associates, and he will tell us—which is far more important—what is to be expected of the profession, hospitals, nurses, and trained hospital employees. We must keep close to Dr. Martin during these feverish days, because he is the friend at court upon whom we must rely if the hospitals are to have that intimate association and that protection which only the government can give. In connection with Dr. Martin's address a resolution will be introduced in the association asking for the appointment of a committee to wait upon the proper governmental authorities and to request that the government associate with itself, in whatever protective measures are necessary, the hospitals of this country, especially in fuels, foods, and hospital and medical supplies.

THE PRESIDENT'S ADDRESS

President Wilson must address himself this year to the war and the changes it has made and is making in the hospital world. He has been in close association with the surgeon-general and other branches of the government, and knows what has been done and is being done, and he will bring to us firsthand information.

Dr. Wilson must also address himself to the changed conditions in the American Hospital Association due to our new charter created last year, which provided for a board of trustees and a permanent secretary. More has been done during the past year for the hospital people by the American Hospital Association than in all the years before, due almost entirely to the creation of a permanent secretaryship under the wise leadership of the board of trustees selected by the association and in virtue of the outstanding leadership of the members.

THE SECRETARY'S REPORT

Dr. Walsh has been busy during the past year. He has established a bureau of information, an employment bureau, and a most serviceable news bureau by which members of the association are kept in quite intimate touch with what is going on. Dr. Walsh has also been active in increasing the membership of the association. For the first time in its history the association has now several life memberships, and the initiative has been taken to increase this class of members, thereby greatly increasing the funds of the association. Every life member must pay $50. Dr. Walsh will tell us about his work, and it is extremely important because this is the first year that we have had a permanent paid secretary.

REPORT OF THE BOARD OF TRUSTEES

Mr. Borden will without doubt make the report for the board. It was Mr. Borden who did most of the work in creating the new constitution, and he will tell us how it has worked during the year, especially as he has also been a member of the board of trustees during the past year. Undoubtedly Mr. Borden will have found that certain changes in the constitution are still to be made, and recommendations for those changes will enter into his report. On the whole, the new constitution seems to have worked out well.

TUESDAY AFTERNOON

Dr. Donald E. Baxter, director of the work of the New York Committee on After-Care of Infantile Paralysis cases, is to read a paper on the organization and operation of that famous piece of work. The New York Committee on After-Care raised a fund of several hundred thousand dollars, partly the donation of the Rockefeller Foundation, and through the committee's agency many of the three thousand children who were stricken by the poliomyelitis plague during that unprecedented epidemic are now on the way to good health and the use of their limbs. Heretofore this country has been dotted with paralyzed people whose condition was due to infantile paralysis, and the New York committee has succeeded in showing us the way whereby a very large percentage of these heretofore helpless cripples may now be restored to society in perfect health.

DR. ROBERT J. WILSON,
President American Hospital Association,
Superintendent New York Hospitals, New York City.

DR. WILLIAM H. WALSH,
Secretary,
Philadelphia, Pa.

MR. ASA BACON,
Treasurer,
Superintendent Presbyterian Hospital, Chicago, Ill.

OUT-PATIENT WORK

Mr. Davis is to bring out-patient work down to date. It is only a year or two since our association became actively interested in out-patient work, and I think Mr. Davis will be able to tell us that many hundreds of hospitals are now conducting dispensaries and doing out-patient work, whereas only a very few had been doing it before their interest was aroused by this association.

VENEREAL WORK

It was the custom of the general hospitals of the country until a year or two ago to refuse to accept patients suffering from the venereal diseases. Thanks to a very vigorous campaign that has been conducted and supported enthusiastically by the association, most of the hospitals are now accepting these patients, the technic of their care has been developed, and hospital administrators are now permitted to feel that they can accept these patients without fear of the destructive cross-infections of the recent past.

HOSPITAL PUBLICITY

Only a few years ago it was considered highly unethical for hospital administrators or trustees to give out for publication any news from their institutions. The result was that there were hazy notions in the public mind as to what the hospitals really stood for and what they were doing. All this has now been changed, and it is regarded as one of the best forms of progressive service for a hospital to

b. in close touch with the public in its community. Where that is the case, the public has found new interest in their hospitals and are supporting them with a generosity never before attained. Mr. Frederick D. Greene, of New York City, has been at the very front of this propaganda for publicity, and is to address the convention on the subject of publicity as a means of education and support. He has

DR. A. R WARNER,
First Vice-President,
Superintendent Lakeside Hospital, Cleveland, Ohio.

DR. D. L. RICHARDSON,
Second Vice-President,
Superintendent Providence City Hospital, Providence, R. I.

MISS GEORGIA M. NEVINS,
Third Vice-President,
Superintendent Garfield Memorial Hospital, Washington, D. C.

a most attractive subject and, as its first exponent in the country, will undoubtedly give us much instructive information about it.

Late Tuesday afternoon there is to be a business meeting, which will be attended by the active members of the association. Reports of committees and consideration of reports that have already been made will be the order of this business meeting.

WEDNESDAY MORNING

Health insurance is attracting an immense amount of attention at the present moment; nearly every legislative body in the country has discussed it; many states have passed laws on the subject and the Federal Congress has had before it many laws for the protection of governmental employees by way of health insurance. In New York City about two years ago Dr. S. S. Goldwater, then commissioner of health, instituted one form of health insurance in the critical examination of every employee of the health department, not only to prevent the infection of others by city employees, but in order to guard the health of those employees themselves, by way of careful examination and diagnosis of any incipient disease that might be cured. There are many varieties of health insurance and Dr. Goldwater has been a deep student in this field; therefore his paper on health insurance should be of most timely interest. On this same general subject is Dr. Thomas Howell's paper on "Workmen's Compensation Laws and Their Relations to Hospitals." These two papers will undoubtedly bring up the whole subject of social insurance.

In this era of hospitalization of the great mass of the people we have almost forgotten an evil that was pronounced in former days, namely, hospitalism, or, as we formerly called it, "chronic hospitalism." The great public hospitals, including municipal institutions, almshouses, and state hospitals for the insane, are still subjects of great abuses from what a former generation called "hospital rats"; that is, patients who sought by one means or another to continue their residence in free public institutions. The day is past when hospital boards and those charged with the financial operations of philanthropic institutions are expecting to derive results from the work of patients, and we are thinking in a new way about the work of patients and convalescents. We are now calling it "work therapy," and instead of occupations in institutions being selected by and done under the direction of head janitors and housekeepers, physicians attending patients are now prescribing that work; and, as we are making better diag-

noses than we used to make, and since we are now attempting to cure patients that were relegated by a former generation to the "scrap heap," there are fewer excuses for hospitalism. The "hospital rat" is being classified and labeled and a proper niche is being found for him, and he is being compelled to take his place as a potential asset of the country. Mr. Pliny O. Clark, of West Virginia, will talk on this subject.

The remainder of the morning session will be devoted to discussions of the war. Major Winford H. Smith, Medical Reserve Corps, U. S. A., will speak on the topic of "The Reorganization of the Civilian Hospital on a War Basis." This is our old friend and former president, Dr. Winford H. Smith, of Johns Hopkins Hospital, now on duty as a major for the war, in the surgeon-general's office at Washington. No one knows better than Dr. Smith the universal and radical changes that have taken place in our hospitals due to the war. Many hospital administrators themselves do not yet realize that their institutions have been greatly affected by the war; but their staff members and interns have been taken, their nurses are scattered over the battlefields of Europe, their orderlies and trained people are with base hospital and ambulance units, and supplies of all kinds have gone up in price sometimes to prohibitive points; and notwithstanding these handicaps the hospitals are asked to mobilize themselves and be prepared to perform a vastly increased service not only for the civil population, in order that the work of physicians and nurses may be concentrated and thus time saved, but also for the actual care of the sick and hurt of the war itself. Many hospitals have already announced the creation of special units to perform operations on prospective candidates for enlistment in order that slight deviations from normal and readily curable conditions may be surgically remedied and the men fitted for acceptance in the army. Publication has been made in several parts of the country, also, that groups of people working about their community hospitals are organized to find funds and create the necessary facilities for the reeducation of the maimed and wounded back from the war. This subject will be most interestingly treated by Major Smith.

Col. Jefferson R. Kean was to have followed with a discussion of "The Role of the Civilian Hospital in War Time," but since this program was arranged Colonel Kean has been ordered to France at the head of the American ambulance organization and as this comment is written he is already on the water. His place will be adequately filled in the program by someone now in command in the Red Cross.

WEDNESDAY AFTERNOON

At the Philadelphia meeting of the association a committee of three was appointed, with Dr. Winford H. Smith as chairman, to work as part of a joint committee on standardization, and Dr. Bowman, at Philadelphia, announced the creation of a large fund at the disposition of the American College of Surgeons to carry on this work. During the past year something has been done, a number of meetings have been held and at least an outline of the work has been made. It is now expected that this work will go forward intensively. In another place in this issue will be found the announcement of a great meeting to be held in Chicago to discuss the standardization of hospitals. THE MODERN HOSPITAL is now publishing a series of articles on standardization, largely for the purpose of blazing the way for the work of Dr. Bowman's and Dr. Smith's committee. Dr. Smith is to tell us at Cleveland what has been done, how the work has been diagrammed, and what the next steps are. It means much to hospitals to know what is going on in this direction.

Details of management seem to attract little attention on programs. Those who address conventions seem to prefer to talk high up in the air, and to that extent the message they bring is lost to the one most needing it. Fortunately our program at Cleveland is to be enriched by much dis-

DR. WINFORD H. SMITH,
Trustee (two years),
Superintendent Johns Hopkins Hospital,
Baltimore, Md.

MISS MARY L. KEITH,
Trustee (one year),
Superintendent Rochester General Hospital,
Rochester, N. Y.

cussion of hospital details. Two of these papers occur at this point in the program, one by Miss F. A. Blanchfield, Bellevue, Pa., on "The Superintendent's Responsibility for Correct Dietary" and the other by Dr. Walter Morritt, of Colorado Springs, on "Practical Hospital Economics."

Another business meeting occurs at 4:30 o'clock on this day.

In the evening the program is given over to a discussion of Hospital Finances and Accounting. Dr. A. R. Warner, of Lakeside Hospital, Cleveland, has been chairman of a special committee on hospital accounting for the past two years; he will open the discussion with a report on what his committee has done during the past year. Mr. Cornelius S. Loder, efficiency engineer, of New York; Dr. A. C. Bachmeyer, of Cincinnati; Mr. Howell Wright, of Cleveland, secretary of the Cleveland Hospital Council; and Mr. F. E. Chapman, of Mount Sinai Hospital, Cleveland, will participate in this symposium.

We are getting somewhere in hospital accounting, and without any question the next year or two is to develop new forms by which hospitals may compare their results with the results attained in other institutions, and when a basis of comparison is achieved we may expect radical improvements in our service and in our savings.

THURSDAY MORNING

On this morning the convention breaks up into two sessions, one of the large hospitals and one of the small, for the discussion of problems rather special in character. In the section on large hospitals, Dr. John M. Peters, of Providence, reads a paper on "Oil as Fuel." This is a new fuel as applied in hospitals and is undoubtedly offered to hospitals by way of new kitchens and boilers for its operation. If there are economies to be made by the adoption of oil as fuel we should be anxious to know about it, especially those of us who have in contemplation new hospital buildings.

Dr. H. G. Goodwin, of the Albany General Hospital, will read a paper on "The Hospital, a Teaching Institution." As The Modern Hospital has insisted many times, all hospitals are teaching institutions, some of them connected with medical schools and some of them by reason of having training schools, and certainly all of them as factors in the education of medical men, nurses, and the public. Dr. Goodwin is well qualified and has some new viewpoints on this subject.

Heretofore research work in hospitals has not created much excitement. Many hospital superintendents and many of our trustees regard research work as something with which the administration has little if anything to do. That time has passed now and the research work of the modern hospital is recognized as peculiarly within the province of the hospital superintendent; not that he has to be responsible for the quality or character of the work, but he cannot avoid responsibility for the facilities and equipment for doing the work. Many times also he must see that there are proper people to do it, and it is also peculiarly his province to see that the interns in his hospital live up to their obligations in respect to the research work of the institution.

One of the hospitals in which this progressive ground has been accepted is the Minneapolis City Hospital, and Dr. H. O. Collins, superintendent and city physician, will tell us how the work is going and give us the viewpoint of the medical staff and the medical profession generally, as well as the administrator in charge of it.

There is a peculiar problem in municipal hospitals regarding training school service; many of these institutions are restricted under political necessity, many others are subject to influence of one sort or another, and in all of them are conditions vastly different from those that prevail in hospitals of other classes.

Dr. Cleveland H. Shutt, hospital commissioner of St. Louis, formerly superintendent of the St. Louis City Hospital, will give us a most interesting paper on this subject, with a discussion by Dr. A. B. Ancker, of the St. Paul City and County Hospital, who has one of the best institutions of this kind in the country.

In these days of preparation for war the necessity to provide for the health and welfare of the civil population cannot be neglected; and it is going to be a hard task for anyone carrying responsibility for the welfare of the folks at home when all of our interests and our sentiment are going out to the boys abroad. Surgeon-General Rupert Blue, of the United States Public Health Service, is charged with this responsibility at this critical time, and he will be at Cleveland to tell us what the problem is, how it is proposed to be met, and what the duty of the hospital superintendent is; an important part of the paper is to be devoted to advice as to how our hospitals back home can aid the government.

SMALL HOSPITAL SECTION

We said early in this comment that we would have many papers and much discussion about details of hospital administration at our Cleveland meeting, and this "small hospital" symposium is to be a veritable wealth of discussion on these small but important problems.

Miss Alice Cleland, of Northampton, Mass., will discuss "The Relation of the Superintendent to the Governing Board and His Obligation as Admitting Officer"; Dr. W. T. Graham, of the University of Iowa Hospital, takes the subject, "The Obligation of the Community to Support Adequate Hospital Facilities"; Miss Nellie Parrish, of East Liverpool, Ohio, discusses "The Laboratory for the Small Hospital"; Mr. Joseph Geffen, of Philadelphia, Pa., "Visiting and Visitors"; Dr. H. J. Moss, of the Jewish Hospital, Baltimore, "The Economical Use of Supplies"; Miss Ida Barrett, of Grand Rapids, Mich., who has just finished her fine new hospital, the Blodgett Memorial Hospital, will discuss the qualities that make a good superintendent of nurses.

AFTERNOON

Thursday afternoon is to be devoted to a round-table for the Large Hospital Section, conducted by Mr. Daniel D. Test. A business meeting will end the afternoon session, at which Dr. Renwick R. Ross, of the Buffalo Hospital, chairman of the nominating committee, will present his report of nominations for officers for the coming year.

FRIDAY

There is no more important problem in our hospitals at the present time than that concerning the medical staff, especially since we are now coming upon a time when definite and restricted hospital staffs seem to be the order of the day. Dr. H. L. Foss, of Danville, Pa., will discuss this problem. Dr. Foss was for some years connected with the Mayo Clinic at Rochester, Minn., and he is now administrator of the splendid new Geisinger Memorial Hospital.

Dr. George O'Hanlon is to report for the committee on legislation. As we have said elsewhere, nearly every state in the Union at every session of the legislature has many bills introduced affecting hospitals favorably or otherwise, and there is no more active duty on the part of the American Hospital Association than to keep its members thoroughly posted as to the effect of the proposed legislation in the several states. One of these days the association

must have a committee in each state whose business it will be to handle these problems of legislation in a unified, constructive way; and the association, when that time comes, will be called upon to rally around its committees and to help them in their attempts to mold legislation from the standpoint of the hospitals and the public health.

When the war broke out, a committee of hospital men was appointed on preparedness. Dr. F. A. Washburn, of the Massachusetts General Hospital, was made chairman, and this committee has done very much, not only to mobilize the civilian hospitals for war, but to help them in their efforts to meet the requirements of the government. Dr. Washburn is to tell us what has been done and how, and what is to be done in the future.

Just following our Philadelphia meeting, the council on health and public instruction of the American Medical Association called a conference in Chicago to take up the question, in a national and comprehensive way, of child welfare; many semipublic health organizations were invited to send delegates. President Wilson appointed for the American Hospital Association Dr. J. A. Hornsby, of Chicago. A large conference was held in Chicago and while no definite proposals were developed, some committees were appointed to obtain statistical data as to what was now being done in the several branches of child welfare, with the end in view to proceed in some regular fashion to coordinate all the work that is being done to prevent overlapping, and to obtain the largest constructive results. Dr. Hornsby is to report at the Cleveland meeting the results of this conference up to date.

A similar conference to the above was called by the American Public Health Association to discuss the mooted problems of dispensaries and out-patient service. Mr. Michael M. Davis, of Boston, was the delegate to that conference and he will report on its deliberations.

In the afternoon, Governor Cox, of Ohio, is expected to address the convention, and, as he is an outstanding, progressive, public-spirited man who has been a public speaker for a long time, he may be thoroughly expected to launch some new thoughts and to inspire some new methods in regard to hospital service and the care of the public health.

There will be other speeches on Friday afternoon of a more or less sentimental character, thanks to everybody for everything and congratulations, if the convention has been a successful one, and the convention will close with the installation of the officers for the coming year.

BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION

Program of the Meeting—Special Trains and Rates—Bureau of Information—Special Features—Commercial Exhibit

HEADQUARTERS

The nineteenth annual convention is to be held in the Hollenden Hotel, Cleveland, O., September 10-14, 1917. There will be ample accommodations there for the simultaneous meetings of two sections of the association and such other small assemblies as may be necessary. On account of the large attendance expected, it will be impossible for all members to secure accommodations at the Hollenden Hotel, and even other hotels will be crowded. All who contemplate attending should either write directly to the various hotels or request the local committee on arrangements to make reservations.

SPECIAL TRAINS AND RATES

Heretofore the local committee has undertaken the task of arranging special trains, and that body may have some announcement to make regarding the matter later. Owing to information received here to the effect that all the railroads were curtailing their service to the minimum, and that it would not be unlikely that further cuts in train service would be undertaken, it was thought desirable to complete arrangements at once for a special train from this territory. It has therefore been arranged to start a special train from New York at 4 p. m. Monday, September 10, which will pass through Newark, Trenton, Philadelphia, Lancaster, Harrisburg, Altoona, Johnstown, Pittsburgh, and Youngstown, arriving in Cleveland, O., in the early morning of September 11. The local committee will arrange to have automobiles in waiting for this train to take the passengers to their hotels.

The Big Four route offers the following special rates, in effect until September 30, which may be used in connection with the Cleveland meeting: St. Louis to Cleveland and return, return limit 30 days, $21.50; St. Louis to Buffalo, Niagara Falls, or Toronto, and return, return limit 30 days, $25.50 (this ticket allowing stop-over at Cleveland both going and return trip); St. Louis to New York and return, return limit 30 days, $40—Big Four to Cleveland, New York Central to Buffalo, free side trip to Niagara Falls, New York Central Lines to New York, or option of using the Hudson River daylight steamers between Albany and New York (if the West Shore Railway is used between Buffalo and New York, the option of using the Hudson River daylight steamers between Albany and New York is also offered, at rate of $37 for the round trip); St. Louis to New York and return, return limit 60 days, $42.55—going, Big Four through Cleveland, thence New York Central lines Buffalo to New York and return via Philadelphia, Baltimore, and Washington, thence C. & O. through the Blue Ridge and Alleghany Mountains to Cincinnati, and Big Four to St. Louis (this ticket also carries the option of using the Hudson River daylight steamers Albany to New York). The Big Four train leaving at 5 p. m. is a very popular train for Cleveland, carrying local sleeper, arriving Cleveland at 6 a. m., remaining in sleeper until 7 a. m. Also have train leaving at 10:30 p. m., arriving Cleveland at 3:55 p. m.

The Central Passenger Association, with headquarters at Chicago, has advised that they will authorize the sale of round-trip tickets from points within Central Passenger Association territory to Cleveland, O., at the rate of two cents per mile in each direction. These tickets, which must be validated in Cleveland, will be on sale September 8, 9, and 10, with a final return limit to reach original starting point not later than midnight September 19. All those desiring to avail themselves of this reduced rate should consult ticket agents at their home towns for detail information as to fares and routes applying in connection therewith.

The Trunk Line Association, with headquarters in New York, have advised that the rate will be on all lines included in their territory two cents per mile in each direction, going and returning via same route only; tickets to be sold and good going September 8 to 10 and returning to reach original starting point not later than September 19.

The Southeastern Passenger Association advises us that there are in effect low-rate summer excursion fares from all important stations in the territory south of the Ohio and Potomac and east of the Mississippi rivers, except

Virginia and the Carolinas. These summer excursion fares will no doubt amply accommodate any passengers who will move from the Southeastern territory. Tickets are on sale daily, with final limit October 15, and allow liberal stop-overs on both going and return trips.

The Eastern Canadian Passenger Association and the Western Association declined to make any special rates.

PROGRAM

The convention will convene at 9 a. m. Tuesday, September 11, and daily thereafter at the same hour.

After the invocation there will be an address of welcome delivered by the mayor of the city, followed by the address of the president.

The remainder of the morning session will be devoted to the reports of the various officials, which will be read and referred for action to a later business meeting.

Among the special features of the program will be a paper by Dr. W. H. Smith, who is now a major in the Army Medical Reserve Corps, upon the subject of the reorganization of the civilian hospital upon a war basis; this will be discussed by Dr. John A. Hornsby, who is also a major in the Medical Reserve Corps.

There will be present a representation of the American Red Cross to indicate the role of the civilian hospital organization in time of war, and in lieu of discussion the time will be allotted to members to ask whatever questions may seem pertinent. Another subject of vital importance at this time is that of the preservation of the health of the civilian population in time of war and the extent to which civilian hospitals may coordinate their efforts with those of the government. There will be present a representation from the office of the Surgeon-General of the United States Public Health Service to present the views of the government upon this matter.

The Council of National Defense, Medical Section, will be represented by Dr. Franklin H. Martin, who will address the association upon various vital matters affecting the hospitals of the country. Dr. Martin will be prepared to indicate the policy of the council upon such subjects as drafting of interns and medical students, conscription of physicians of military age, allotment of supplies to civilian hospitals in the event of a national shortage, the standardization of instruments and supplies, and a score of kindred subjects.

The League to Enforce Peace has delegated a distinguished speaker to appear before the association to present the views of that organization as to the duty of our citizens to our country in helping in every conceivable way to carry the conflict to a successful issue and to conserve the fruits of victory by some lasting union of nations to enforce peace upon the whole world.

Another subject of absorbing interest at this time will be one upon French and American war hospital plans; this subject will be handled by Mr. Charles Butler, architect, of New York, who has recently spent eighteen months in France as a member of the American Relief Clearing House, during the greater part of which time this gentleman was detailed to the French Ministry of War as an expert on hospital construction in connection with the design of war hospitals.

In addition to the subjects above mentioned the program is replete with topics of every-day interest to the hospital administration; indeed, seldom has a program of the association covered wider scope. We desire to again state at this time that unless copies of papers to be read are in the hands of the Secretary by August 15 it may be impossible to either publish the paper in the proceedings or to announce it in the final copy of the program.

SPECIAL FEATURES

We are straining every effort to have the government place a base hospital in active service at Cleveland during the convention in order that our members may become accustomed to the various details of organization and equipment. We have every reason to believe that our plans will be successful.

We also hope to have a display by the American Red Cross of standard supplies accepted by that organization for military and civilian relief. This display will afford an excellent opportunity to those interested to learn just what is needed by the Red Cross, and will also demonstrate the system adopted for the coordination of all relief work.

SOCIAL FUNCTIONS

Before it was definitely decided to turn the nineteenth annual convention into a movement for the mobilization of the hospital resources of America the local committee had planned various features for the entertainment of visitors. As national affairs became more serious, however, the trustees decided that it would hardly be in good taste to spend either time or funds upon purely social functions, and therefore instructed the committee to reduce their plans to a minimum. Consequently, this meeting will be one of serious business, although the local committee desires that all shall be notified that there will be open house at all local hospitals for the reception of members and their friends. It is also planned to give a luncheon to which all are invited at the Mount Sinai Hospital, one of the newer institutions of Cleveland.

REGISTRATION

We wish to impress upon everyone the very great importance of registration. Ample facilities will be afforded the members, and each one is requested to fill out the registration card before attending the first session. The records of the association cannot be accurately kept unless all cooperate with the secretary in this matter. Those who have failed to pay either 1916 or 1917 dues will please be prepared to do so at the time of registration. Please remember that apart from the proceeds from the commercial exhibit, the only income available for the support of the association is from the dues for membership. There will be a number of clerks at the registration desk and, except during the sessions, both the secretary and treasurer will be at their desks in the same room.

BUREAU OF INFORMATION

For the first time in the history of the association there will be established in spacious quarters a bureau of information at which there will be in attendance experts in almost every line of hospital endeavor. There will be on file plans and specifications for every conceivable kind of a hospital and catalogs of supply houses that furnish hospital equipment. One agent will be on hand to impart information about Cleveland, her hospitals, and other facilities.

At this bureau will also be conducted a post office and telephone and telegraph calls will be immediately delivered by special messenger service. This vast undertaking has been placed upon the shoulders of THE MODERN HOSPITAL and its staff under the immediate supervision of Drs. Hornsby, Ball, and Nolan, and Mr. Howell Wright of the local committee. It is the belief of the officers that this feature will prove of immense value to all members.

COMMERCIAL EXHIBIT

All who saw the exhibits at Philadelphia, and, indeed, the exhibitors themselves, generally agree that the undertaking was most profitable, and that the value of the convention was greatly enhanced thereby. Unfortunately, no special arrangements were made last year to provide periods for the inspection of the exhibits, and the program took up almost every available minute of time. The president, recognizing the value of these exhibits to the members, has so arranged the program as to provide certain hours to be devoted exclusively to the inspection of exhibits and for the transaction of any business that members may have to attend to. We do not believe that a more comprehensive exhibit of hospital supplies and equipment has ever before been assembled, and hospital superintendents are urged to scrutinize carefully all that may be shown. All who attend this convention are advised to take advantage of the quotations that will be made by exhibitors and place orders, particularly for staple supplies, for a considerable period in advance. We have no way of determining the length or severity of the war, but every reason to believe that we are engaged in one of the most stupendous wars ever confronting our country. As the war continues prices will fluctuate and many articles now obtainable will be either unobtainable or greatly advanced in price. Now is the opportunity for the far-sighted hospital to provide for the future.

Those who do not care to buy will be treated with the same courtesy as those who place large orders, but we expect every member of the association to utilize an opportunity to see a display that may not soon again be duplicated.

LETTER TO HOSPITAL BOARDS

We propose to send a letter to the board of managers of most of the hospitals in this country and Canada, calling attention to the advantages of the superintendent attending the convention and suggesting that the hospital meet the necessary expenses. It will be sent in care of the superintendent and we hope will be at once presented to the various boards.

This convention is perhaps the most important ever held, coming as it does at a time when the government desires to secure by every possible means the cooperation of every activity and industry. By attending the convention you will not only help your own institution by the knowledge gained, but your presence will be of national aid to the association and the government.

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WELCOME TO CLEVELAND

The Mount Sinai Hospital Management Arranges to Receive Members—A Luncheon to Be Served

To the Members of the American Hospital Association:

It is hoped that the nineteenth annual meeting of the American Hospital Association, to be held in Cleveland in September, will be the most successful meeting in the history of the American Hospital Association. Never before has there been such a need for close cooperation in and coordination of hospital activities.

The Cleveland members of the association are fully cognizant of the responsibility they must assume in the success of this meeting and are making every effort within their power to make the meeting a most beneficial one and one that will be remembered by all who attend.

We want to assure everyone of a most hearty welcome. We want you to know that Cleveland fully appreciates the honor of having you as its guests during the period of the convention and is going to do everything possible to make your stay a pleasant one. To expedite your getting to headquarters, every train arriving during the first two days of the convention will be met at Union Station and at the East Fifty-fifth Street Station on the Pennsylvania.

Your local committee, in conformity with the wishes of the Board of Trustees of the association and in keeping with the general conditions in the country, have eliminated any elaborate entertainment scheme, but we do hope to show you some of the beauties of our city and to serve you with luncheon at Mount Sinai Hospital.

If you will come to Cleveland, absorb some of the Cleveland spirit, secure the benefits of the discussions, and take home with you some little good, we will be truly glad.

FRANK E. CHAPMAN,
Superintendent Mount Sinai Hospital, Cleveland.

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SPECIAL TRAIN FROM CHICAGO

Sherman House Headquarters for Visitors—Some Social Entertainment Provided by Committee Appointed by Trustees

For hospital people in the Central West who intend to go to the convention, there will be a splendid Hospital Special train from Chicago. Arrangements have been made for the Sherman House as headquarters and a central meeting place before the train starts. Although the time is not yet agreed on, it is likely the train will leave Chicago Monday night.

The trustees have appointed Mr. J. L. Meigs, superintendent of St. Luke's Hospital, as chairman, and Dr. E. T. Olson and Dr. C. O. Young as the other members of the Western transportation committee, and in a few days full information will be sent to all the hospitals in the Central West about the special train and other arrangements. It may be stated that a program of entertainment in Chicago has been arranged by the committee, including auto rides in the parks, visits to the newer hospitals, and a few other features. Ample funds for this entertainment are in the hands of the committee.

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HOSPITALS OF CLEVELAND

Some of the Hospitals That May Be Visited—Other Places of Interest

MOUNT SINAI HOSPITAL

The new Mount Sinai is situated on East One Hundred and Fifth Street, facing Wade Park. It has a frontage of 560 feet and a capacity of 174 beds. The cost, including the grounds, was $590,000. There is an active out-patient service. Half of the private pavilion is now being used for a nurses' home.

THE CLEVELAND HOSPITAL COUNCIL

Cleveland has eighteen special or general "public" hospitals, all of which are represented in the Hospital Council. They include two municipal hospitals and sixteen operated "not for profit." The following are the eighteen hospitals represented in the council: Babies' Dispensary and Hospital, Cleveland City Hospital, Cleveland Tuberculosis Hospital (Warrensville), German Hospital, Huron Road Hospital, Lakeside Hospital, Lutheran Hospital, Maternity Hospital, Mount Sinai Hospital of Cleveland, Mount Sinai Hospital (Old), Rainbow Hospital, St. Alexis Hospital, St. Ann's Maternity Hospital, St. Clair Hospital, St. John's

Hospital, Saint Luke's Hospital, St. Vincent's Charity Hospital, Woman's Hospital. According to the best available statistics, sixteen of these hospitals now in operation maintain 2,197 beds. This number was considerably increased in 1916, as follows: Mount Sinai Hospital of Cleveland (September 1), 155; St. John's Hospital (June 1), 200; St. Vincent's Charity Hospital (September 1), 150; City Hospital (July 1), 105; and Cleveland Tuberculosis Hospital (Warrensville), 50. These hospitals will serve Cleveland with 2,857 beds.

Mount Sinai Hospital, Cleveland.

The following are some of the things the hospitals have done through the council to increase their efficiency to the end of better meeting Cleveland's hospital needs: (1) agreed to report yearly the number of different patients cared for and the total number of days' treatment given free, part-pay, and pay patients; the pay patients to be those who pay at least the entire cost of their care; the part-pay patients, those who pay only part of the cost of their care; and free patients, those who pay nothing; (2) agreed not to rent private rooms to patients at rates less than the full maintenance cost of the rooms; (3) agreed not to rent their beds for cases for which industrial or other corporations are morally and by the Ohio laws responsible, at less than cost or to maintain such beds or give such service at less than cost.

The Hospital Council with its eighteen represented hospitals may be likened in some respects to certain voluntary or incorporated associations of large business corporations. In general, its purpose is to preserve and promote the common interests of the constituent members. While not obligated by any formal agreement the hospitals have a common obligation to assist each other as follows: by coordination of action and development of the most efficient methods in the performance of their various functions, thereby simplifying problems of management, preventing duplication of effort, eliminating waste, reducing costs and improving the service rendered; to give the public an intelligent accounting of their stewardship; to educate the public to a substantial degree of willingness to give moral and financial support; to initiate and favor wise local and state legislation and to oppose all legislation inimical to their field of work. While the chief object of business concerns so associated is to increase profits, the aim of the hospitals so associated is to increase the service rendered to the community. In both, however, great financial and human interests are involved.

Lakeside Hospital, Cleveland, showing dispensary building in center foreground, administration next, and nurses' home at distant right.

St. Luke's Hospital of the Methodist Episcopal Church, Cleveland

The hospitals own land and buildings and equipment valued at $5,169,250.

They spend for operating expenses each year $1,169,450; for salaries and wages alone they spend $374,000 yearly, and for provisions, hospital supplies and equipment

The Babies' Dispensary and Hospital, Cleveland.

$562,975, and for other expenses, $227,595. They have an annual income of $1,167,800; $330,675 being derived from tax collected funds, $589,165 from hospital earnings (patients), $109,010 from endowment or bequests, and $139,065 from contributions.

In a single year they care for nearly 70,000 people, or about 10 percent of the entire population of Cleveland.

They command the services of 420 physicians and surgeons; 600 nurses, and 750 other officers and employees; 850 men and women are officially connected with the hospitals as directors, trustees, or members of committees.

THE CLEVELAND FOUNDATION

Visitors to the convention, especially those who come from large cities, should make some inquiries and study the institution known as the Cleveland Foundation. This is a new sociological organization already possessed of a fund aggregating several million dollars and intended to be a very wide-reaching civic philanthropy, as well as a promoter of educational, scientific, and altruistic activities.

Under the charter of this organization it has the right to conduct schools, hospitals, dispensaries, and almost anything else that its trustees engage in. The original purpose was to create something like the Rockefeller and Carnegie Foundations, but to finance it with the aggregate of many funds to be donated by many people.

The only activity it has engaged in up to the present is a survey of the public health situation in the hospitals of the city, and it has not gone far with this. The people of Cleveland are not all satisfied that the Cleveland Foundation is wholly altruistic, since it was conceived almost entirely by the Cleveland Trust Company, a large banking institution, and the president of the Foundation and one of its most active promoters is an officer of the bank.

LAKESIDE HOSPITAL

Lakeside Hospital of Cleveland has a visiting staff of 90 and a house staff of 24. There are 289 available beds. In 1914 there were 4,541 patients treated in the hospital; 51,984 visits were made to the dispensary. The value of the land, buildings, and equipment belonging to Lakeside Hospital is $920,323.

A fund of over $3,000,000 is now available for the purpose of building a new hospital for Lakeside, connected with a new medical school for Western Reserve University. Plans have been drawn up and land has been selected in a high and beautiful situation in the outskirts of Cleveland and the buildings will soon be erected.

ST. LUKE'S HOSPITAL OF THE METHODIST EPISCOPAL CHURCH, CLEVELAND, O.

This hospital opened July 20, 1908. Its motto is "All Healing is Divine Healing." Five buildings are occupied as homes for the 54 pupil nurses of the school of nursing. The nurses' course covers three years of theoretical and practical instruction. Literature will be sent on application. The entire plant, with equipment, cost $254,158, $35,000 of which came from two bequests. The hospital has 42 rooms and five private wards, with a capacity of 110 beds. Two houses are used in conjunction with the hospital, thus giving a total capacity of 140

Huron Road Hospital, Cleveland.

beds. The staff is composed of some of the most skillful physicians and surgeons in Ohio. The institution is controlled by the Northeast Ohio Conference of the Methodist Episcopal Church, through a board of fifteen trustees. The year closing July 1, 1916, shows as follows: number of patients in hospital, 3,212; number of dispensary patients, 3,319; number of births in hospital, 195; number of births in homes (maternity dispensary), 247; total number of pa-

tients cared for during year, 6,531; total number of patients cared for since opening date, 30,668; charity and part-pay service for year cost hospital $37,902.72. Receipts from patients, $90,490.76; miscellaneous receipts, $2,679.96; total receipts during year, $93,170.72; expenditures during year, $106,074.63. The officers are as follows: president, F. F. Prentiss; vice-president, C. G. Watkins; secretary, J. R. Mills; treasurer, William H. Hunt; superintendent, C. B. Hildreth, Ph. G.

New surgical pavilion of St. Vincent's Charity Hospital, Cleveland.

THE BABIES' DISPENSARY AND HOSPITAL

The object of the Babies' Dispensary and Hospital, situated at 2500 East Thirty-fifth Street, has been thus stated:

"To prevent, cure, and study sickness in babies and children, from both the medical and the social standpoint, and to educate physicians, nurses, nursery maids, mothers, and the public in general, in the care of infants and children."

The principal features of the institution are: a central dispensary, where only sick babies are admitted, in charge of a medical director, a superintendent, a physician in charge, six physicians, and three supervisors; a central milk laboratory, with eighty distributing stations; an outdoor ward, during the summer months, with a nurse in charge, two interns, six nurses, five nursery maids, and a wet nurse; a radiography and photography department, with a nurse in charge; a nurse who gives massage and electrical treatment in cases of infantile paralysis.

The innovation of charging graduated fees has been successfully put in practice. The plan is justified less as a way of producing income than as a means of preserving the self-respect of patients, who usually prefer to pay. The number of individual patients treated at the central dispensary in 1915 was 3,290; there were 4,478 cases registered in the fifteen prophylactic dispensaries. One hundred were treated in the hospital, in which there are 21 available beds. There were 9,076 patients receiving milk, of whom 957 were charity cases. For prevention of blindness, 880 infant patients were visited. Boarding homes were found for 175 babies. The value of land, buildings, and equipment belonging to the Babies' Dispensary and Hospital is $139,833.

Cleveland State Hospital, Cleveland.

St. John's Hospital, Cleveland.

HURON ROAD HOSPITAL

At the close of the Civil War, Mrs. H. B. Tuttle, president of the Ladies' Sanitary Commission, organized a society known as the Ladies' Aid Society for the purpose of conducting a hospital. The property was secured on Wilson Street, and the first hospital in the city was organized, the parent of the present Huron Road Hospital.

In 1867 an out-patient department for the relief of the worthy poor was established on Seneca Street by Dr. H. F. Bigger. In 1868 the medical school secured the property on University Heights, known as the Humiston Institute, and the Wilson Street Hospital was removed thereto, as was also the Good Samaritan Dispensary.

After a number of years, namely, 1874, the hospital was incorporated and secured its present location on Huron Road. The present main building was completed in 1881 and the annex in 1885. The annex was built to accommodate a training school for nurses which was organized in this hospital in 1883, and was the first training school west of the Alleghany Mountains.

Since its conception to the present time the hospital has been devoted largely to the care of accident-surgical cases. An increasing number of cases year by year corresponding to the growth of the city has largely determined the type and character of the work in this institution. Seventeen hundred patients have been treated in the hospital in a year, and over 2,000 in the dispensary.

The hospital association owns a beautiful lot overlooking a boulevard where it expects to build in the near future. The land, buildings, and equipment are valued at $200,000.

ST. VINCENT CHARITY HOSPITAL

St. Vincent Charity Hospital, under the management of the Sisters of Charity of St. Augustine, antedates all the other local hospitals in Cleveland, having been founded in 1865. The main building, on East Twenty-second Street, cost $72,000 and originally had a capacity of eighty patients. In 1872 an amphitheater was added, and in 1873 a three-story brick building was erected on Marion Avenue, almost adjoining the hospital, which served as an infant asylum and maternity hospital until January, 1902, when this branch of the service was moved to Woodland Avenue and the Marion Avenue building was converted into a nurses' home. In 1898 additions providing for eighteen patients were made to the main building, and in 1901 a three-story brick building was erected on Central Avenue to house the surgical division for women. The free dispensary was opened in 1894; it now has an average daily attendance of seventy. In 1898 the training school for nurses, which now has fifty-four pupils, was opened. The new surgical pavilion, which is shown in the illustration, was dedicated April 15, 1917. Over 2,500 patients were treated in the hospital in a single year, and over 20,000 in the dispensary. The land, buildings, and equipment are valued at $377,490.

CLEVELAND STATE HOSPITAL

The Cleveland State Hospital was opened for the care of the mentally sick March 5, 1855, in what was then a veritable wilderness, south of the city of Cleveland; today a part of Cleveland, the sixth city, it stands a massive and imposing structure of gray stone and brick in a scenically beautiful park, high above Lake Erie and the manufacturing level of the city, the natural facilities for good air being exceptionally good. About the grounds are grouped the different buildings which go to make up a complete institution.

The hospital has 101 acres of land, about 25 acres of which is utilized for intensive gardening purposes, and the rest is covered by buildings and devoted to lawns.

The buildings, equipment, and land are valued at $1,750,000. The hospital district comprises Cuyahoga, Geauga and Lake Counties.

At the close of the fiscal year ending June 30, 1917, there were 1,980 patients on the hospital records.

ST. JOHN'S HOSPITAL

The capacity of St. John's Hospital is 210 beds. It is of strictly fireproof construction, and has a pathological laboratory, x-ray and hydrotherapy departments, and 16 sun porches.

THE COOLEY FARMS

The "Cooley Farms" is the one big overshadowing institution of Cleveland's public service. It is an outgrowth of the ideas of the late Tom L. Johnson. This is a group of

Fig. 1. Courtyard and "cloister" of the colony group for aged men and women, Cooley Farms, Cleveland.

farms aggregating 2,000 acres, owned by the city, and situated 15 miles out, on a high, rolling plateau.

The "Farms" was named for Dr. Harris G. Cooley, a national figure in social and health service, and for many years director of welfare of the city.

Fig. 2. Cottage for aged couples, Cooley Farms, Cleveland. The idea is not to separate old married people who are dependent.

There are many public buildings on the "Farms," and several rather old farm houses, taken over with the purchase of the various farms that go to make up the institution. At the present time the colony group is the center

Fig. 3. Tuberculosis ward, with kitchens and dining rooms in front center of picture. Note porches for patients on both floors.

of the farms, and the largest unit. It is composed of dormitories for old, dependent men and women, a service building, and a smaller building for aged couples, old, de-

pendent men and their wives. That these old couples should be permitted to finish their days together was one of the ideas of Tom Johnson.

Then there is the tuberculosis group, for men, women, and children, and a service building for them. The third group is the so-called correctional group, where petty offenders are housed. These people are not locked up as most prisoners are, and are free to run away if they like. Visitors should inquire as to the reasons why only a very small percentage of the prisoners do not run away.

The fourth group is the hospital, which is not yet completed, but which will be one of the show places of the "Farms" when it is completed. There will be housing for convalescents sent out from the various city institutions, a psychopathic ward, and a general hospital for those resident on the Farms.

There is a herd of pure bred Holsteins whose product goes to the Babies' Dispensary and to the City Hospital, the beginning of a poultry plant, magnificent truck gardens, and big grain acreages.

The Cooley Farms is the most ambitious welfare project that an American city has ever undertaken.

VOCATIONAL WORK FOR THE BLIND IN MASSACHUSETTS*

Special Service Offered by the Massachusetts Commission for the Blind—Teaching, Aid in Securing Employment, Counsel, Help, and Recreation

BY LUCY WRIGHT, General Superintendent of the Massachusetts Commission for the Blind, Boston.

The work of the Massachusetts Commission for the Blind is perhaps most simply outlined in the following summary designed for enclosure with letters:

Blind persons may ask at this office for:

Home teachers, who will visit them in their homes and teach reading by touch, the use of the typewriter, sewing, knitting, reseating of chairs, etc.

Use of salesroom, where things that are well made by the blind, whether in their homes or in special shops, are sold upon their merit.

Shop-employment, which is given especially to men and women who cannot readily find work alongside the sighted, as rapidly as vacancies occur and as the business grows. Shop industries are, for men, mop-making, rug-weaving, broom-making, and willow work; for women there are chair reseating, fabric-weaving, and braiding of old-fashioned rugs.

Fig. 2. The State of Massachusetts sends blind teachers into the homes of other blind persons to show them how to read by touch.

Fig. 1. Class in willow work under the Massachusetts Commission for the Blind.

Expenses of special training for blind persons of promise approved by the board.

Aid in equipment, tools, etc., when needed for starting home industries for blind workers of promise approved by the board.

Counsel and help in securing work alongside the sighted, if possible, and in securing the service of schools, hospitals, relief funds, etc., for which blind persons like others are suitable applicants.

Recreation, including visits to the James A. Woolson House (a social center for blind women) and Thomas Park House (a social center for blind men), concert tickets and other advantages offered through the Massachusetts Association for Promoting the Interests of the Blind.

What this outline, planned to answer questions in the minds of blind persons and their families, does not suggest is various forms of special service offered the community.

At the central office, for example, which is a clearing house for matters relating to the blind, a register of the blind of the state is maintained. From this office field workers go to all parts of the state to visit the newly blind. At the central office is located, too, not only the bureau of information, advice and aid for the blind, which has been previously described, but a center for study and cooperation in non-medical work for prevention of blindness and conservation of the eyesight.

*The illustrations accompanying this article are shown by courtesy of the Association for the Blind.

ORGANIZATION

The organization behind these forms of service is that of a board, of five unpaid members, appointed by the governor for terms of five years. The commission works under a law of 1906, which limits its work largely to the educational and industrial field by the proviso "that the commission shall not undertake the permanent support or maintenance of any blind person." The work of the commission has been extended since 1906 by acts of 1916 which provide for "Exchange of Information between the State Board of Charity and Overseers of the Poor and the Massachusetts Commission for the Blind, and to provide for Aiding Persons with Seriously Defective Eyesight"; and "for the Instruction of the Adult Blind at their Homes."

The management and immediate charge of the department is in the hands of a general superintendent with a staff of workers variously equipped for the somewhat specialized fields of work included in the following divisions: (1) central office; (2) salesroom and special sales; (3) local shop system; (4) Cambridge Industries; (5) Woolson House Industries.

RESULTS

Among the more important results of ten years' work have been an effective campaign for prevention of blindness and conservation of eyesight, the initiation of sight-saving classes in the public schools of several cities, and the development of industries for the blind, of which the following industrial summary is perhaps the briefest outline:—

INDUSTRIAL SUMMARY

Year	State Appropriation	Number Reached	Number Materially Benefited	Number Given Industrial Training	Number Employed Regularly in Commission's Shops	Earnings of Blind in Commission's Shops (Selection and Staff)	Total Sales
1906-07.	$40,000.00	608	464	57	65	$ 8,358.82	$12,612.97
1907-08.	40,000.00	656	392	77	84	13,769.98	18,754.79
1908-09.	45,000.00	784	380	40	86	19,502.52	34,669.40
1909-10.	45,000.00	818	400	39	96	25,050.53	53,029.50
1910-11.	50,000.00	876	464	42	90	29,544.92	67,331.98
1911-12.	57,781.04	2,081	584	28	99	35,183.17	54,592.56
1912-13.	65,000.00	1,149	600	26	112	40,543.33	55,556.24
1913-14.	67,000.00	1,695	750	20	113	42,205.55	50,737.43
1914-15.	67,005.45	1,847	800	22	113	45,010.04	75,671.06
1915-16.	71,210.23	2,363	1,043	32	132	50,350.82	88,692.18

THE CHICAGO LIGHT HOUSE FOR THE BLIND*

It Sheds Light on Many Darkened Pathways—Two of Its Pupils Write of Its Work

A representative of THE MODERN HOSPITAL, in going through a large Chicago department store, noticed some attractive old-fashioned rag rugs, of the kind that have lately become fashionable, and was told that these were the work of blind persons. Some, it appeared, were made in Massachusetts, under the auspices of the Massachusetts Commission for the Blind, whose work is described on another page by Miss Lucy Wright. Others were made in Chicago under the direction of a private organization known as the Chicago Light House for the Blind, for information regarding which THE MODERN HOSPITAL'S representative was referred to Mrs. C. T. Hood. Mrs. Hood, having been requested to furnish THE MODERN HOSPITAL with some account of the Chicago Light House, was kind enough to secure for us the two articles which follow. Both were written by cultured blind persons who are pupils of the Light House. Both manuscripts were typed in excellent form by the authors (about twenty-five members of the Improvement Association for the Blind, mentioned below, use the typewriter), and have been set up as written, with no more than the slight editorial changes always necessary for conformity to style.

* * * *

The Needs and Welfare of the Blind

BY S. H. AUSTIN, Chicago.

The blind may be divided into three classes; those who lost their sight after middle age, those who lost their sight before 5 years of age, and those who lost their sight between the ages of 5 and 30 years.

Those who lose their sight after middle life seldom become reconciled. They realize their awful condition, and the shock of their affliction is so terrible that it robs them of all their ambition and vitality. The clouds of gloom gather so thick about them that not a ray of sunshine can enter their soul; it seems almost impossible to regain hopes and courage. Therefore, not being able to adapt themselves to their condition their future is blank.

Those who lose their sight before 5 years are dearly loved by their parents, who would do almost anything for their happiness, but who make one sad mistake—they forget the future. Take a beautiful house-plant; put it into a dark cellar without light and air; it soon loses its luster, grows weaker and weaker, dwindles away, and dies. The little child set down in a chair without sunshine, fresh air, and exercise, like the plant, cannot develop. The child is not permitted to move about for fear it may get hurt; thus, when it is of age, it is a little, weak, scrawny creature. It has not been taught anything and grows up into an ignoramus and, sometimes, an imbecile. When its parents are gone, it is a candidate for a charitable institution, or the public almshouse.

Those who lose their sight between the ages of 5 and 30 years constitute the industrial class. They are sent to the school for the blind at Jacksonville, Ill., where they receive an education, both mental and physical. They become fully developed, and also learn music and some trade. They are as the colored people were after the war; they have no homes, no money, and no experience. Some of these who make themselves attractive and who have an over amount of ambition succeed in getting a helping hand from their friends and do well. Others who are not so fortunate can only drift where the winds drive them; they can take their tin cup, stand on the street corners seeking alms from the passersby, or seek shelter in some charitable institution.

If the public is interested enough in the blind to give them an education, then they should go a step further and provide opportunities for them to utilize the advantages acquired at school and opportunities that will make them producers of wealth instead of objects of charity.

Illinois, in 1894, built the Industrial Home for the Blind, which was to give the blind employment and an opportunity to earn an honest and comfortable living. This was a grand and noble idea, but politics would occasionally appoint a man for superintendent who was incompetent for the position and indifferent to the welfare of the blind, and whose aims and motives rose no higher than the filling of his pockets and fat living at the expense of the state. Through such incompetent management the factory became a sinkhole for public funds. Because of this great waste there was a sentiment for a year or two to abolish the home, but Chicago politicians would not agree to such

*The illustrations accompanying [illegible] shown by courtesy of the Chicago Light House for the Blind.

an action. So such evils had to endure for a time. From administration to administration conditions naturally grew better, till now thirty blind men support their families almost entirely by their earnings from their work in this factory.

Thirty years ago a man with all his faculties and a little means could go into business and compete with the world and succeed. Today that same man would soon be crushed by capital and monopoly and would soon be forced out of business. If a man with all his faculties cannot compete with the present conditions, then it would be folly for a blind man to undertake business singlehanded. Co-operation of labor is the only safeguard to success in an industry; or, in other words, concentration of efforts, wealth, and labor. As the blind are poor and have no means, it is impossible for them to concentrate their efforts and labor without the assistance of charity.

About ten years ago I became acquainted with Mrs. Hood, and through this acquaintance she became interested in the welfare of the blind. She and some of her near friends set to work to assist the blind and to find employment for them. She soon found that her efforts were useless, for the blind could do only certain kinds of work. And, besides that, employers did not like to hire the blind, because they required a little more waiting on than a sighted person, and because they were afraid that they might get hurt and that they would be responsible for the damage; and they did not care to accept such a responsibility. And, besides that, a sighted workman could turn out more work and make more profit for the employer.

She soon realized that the only hope of success for the blind was an industrial center where the blind could meet and get the employment that they could best do and that would be the most remunerative.

The workshops in the Eastern states were running successfully, and the blind were making a comfortable living there. She concluded that the blind of Illinois were just as bright as the blind were in the East, so she organized the Improvement Association for Blind People, and began plans for an industrial center. This movement was finally launched a year ago this spring, when they purchased property and located at 3321 West Twenty-second street. They named the place "The Light House."

Broom-making and rug-weaving are the most suitable trades for the blind, and the most remunerative. As there are no rugs imported from the European countries at present, the American rug factories have more than they can do and cannot supply the demand. The high prices obtained for rugs make it a very profitable industry, as these high prices are likely to be retained for some years to come. Rug-weaving is likely to become the most remunerative industry for the blind.

The Light House is badly in need of more room and space to develop this industry and to teach broom-making. It is sincerely hoped that people with means may become interested in The Light House and the welfare of the blind and that new buildings may soon be erected. In this way these industries may be developed and the great opportunity that the blind have so long looked for may be realized—they will have steady employment and will make a comfortable living for themselves and their families. It is opportunity they want, not charity.

* * * *

The Story of the Light House

BY ANNA E. WILLIAMS, Chicago.

Little or nothing was known of the blind until the latter part of the last century, when the great and good Doctor Howe conceived the idea of teaching them to read by touch. It was a wonderful thought, out of which has grown the state schools for the blind. Every state in the Union now maintains such a school, at which blind pupils are given the usual high-school course. Where the pupils are found to possess musical talent, it may be developed to a surprising degree of excellence.

But, after the school days are over and the pupil leaves the institution with his well-earned diploma in his hand, there still remains unsolved the ever-present problem of "bread winning."

A few trades are taught in the school, among which broom-making and piano-tuning have seemed more promising for the men, and typewriting and fancy work for the

Fig. 1. Weaving department of the Chicago Light House for the Blind.

women. These occupations, however, have proved of little value in the way of actual support. Besides the blind of whom I have been speaking there are those who were deprived of sight at a time of life when school seemed out of the question and when their labor was actually needed to support their families. To these the case seemed hopeless, indeed.

Then the State Industrial Home was established. This consisted of a broom factory and a dormitory where the workmen might reside, if they so desired. They were paid at the rate of a dollar per day for their labor, and, if they lived in the institution, they paid a portion of this sum for their board. The founders of this home were among the more fortunate blind of Chicago, and they were

Fig. 2. Domestic science class of the Chicago Light House for the Blind. Practice teachers are furnished through the courtesy of Lewis Institute.

assisted by their influential, far-seeing friends. It was hoped and believed that the place would soon be self-supporting.

But the institution met with many vicissitudes. The great progressive world moved on at a rapid pace, and the price of material kept pace with all other advancements. Steam machinery and inventions for more rapid production soon succeeded the simpler methods by which the blind had been taught to work. There were times when the factory was closed, because the state appropriation was inadequate to meet its needs. There were times when

the market was dull or the salesmen incompetent, and the factory became overstocked with brooms. There have been rapid changes of administration, because of the changes in politics. The broom-makers, too, fought the factory, and the tide of competition set swift and strong against the blind workman. Through all these years the simplest living had become so great that there seemed but one way to meet it.

Can you picture a sadder sight than the father, gray-haired and blind, standing on the street corner, mutely beseeching alms from the passerby, that he may bring home food to his little ones? Or the blind woman, well educated, delicately bred, possessing all the instincts of refinement, engendered by her early training and environment, lifting up her voice in some pathetic song of home and mother, that, through the medium of music, she may awaken tender memories and thus reach the great, warm, throbbing heart of the mighty throng who are passing constantly, and procure thereby her daily bread?

These things and many more came to the attention of Mrs. C. T. Hood, and she, at the head of a band of good women, began to organize the blind into a society, known as the Improvement Association for the Blind. Mrs. Hood's task was no easy one; there were obstacles to be surmounted, difficulties to be overcome, oppositions to be met and conquered. Still these good women were not discouraged. Mrs. Hood and her faithful workers went steadily forward. For, like good gardeners, they had planted the seed of a great work, and they pruned, dug, and watered this plant; they gave it light, air, and sunshine, till it sprang into vigorous life; and they are today rejoicing at its growth. More and more people became interested in the work; more and more of the blind people were drawn into the society, until it has become a recognized organization.

Fig. 3. Glee club of the Improvement Association for Blind People.

It was then that Mrs. Hood felt the need of a place, a place for our regular meetings, a place where food and clothing might be distributed to the needy, where avenues of employment might be opened for the blind, a social center from which all manner of good might radiate. So a piece of ground containing a small building was purchased. Because of the light it shed over the lives of those who are compelled to struggle onward and upward in the dark, this place has been given the appropriate name of "The Light House."

It is only a year since The Light House was opened, yet the good it has already accomplished can scarcely be estimated. The first object of Mrs. Hood and her associates was to find some remunerative employment for blind women, that they might also assist in the daily struggle for existence. Therefore, five looms for the making of hand-woven rugs were installed in The Light House, and a teacher was employed to instruct the women.

The women are paid at the rate of 25 cents an hour as soon as their work becomes salable. Rug-weaving has proved itself to be the most profitable occupation yet found for blind women.

But this is not all that The Light House has done. A sewing circle and a chorus class have been organized. Each alternate Sunday an open-door meeting is held, under the direction of Mrs. Hancock. These meetings are devoted entirely to entertainment. Some prominent speaker is invited to address the meeting, after which patriotic and old-time songs are sung. Before the gathering breaks up cake and coffee are served.

Thus, from small beginnings, gigantic enterprises have grown. And we are looking forward to the time when every blind man and woman in the state of Illinois shall be earning an independent living, and when the fame of the Chicago Light House and its work shall have spread throughout the world.

THE FEEBLE-MINDED IN INDUSTRY*

Mental Defectives in Institutions for the Feeble-Minded, in Prisons, and in Society—Need of Scrutinizing the Mentality of Candidates for Employment

BY C. S. ROSSY, Industrial Psychologist, Psychiatric Clinic, Sing Sing Prison, Ossining, N. Y.

One of the principal phases of the problem of feeble-mindedness is the relation of the defective individual to industry. What can the mental defective do? What are the results of his attempts to compete with normal individuals? What conditions are most favorable for his maximum industrial production? Without doubt, these are questions deserving careful attention. We shall approach the problem from two different angles, considering, first, the institutional subject and, second, the feeble-minded individual who is at large in the community. In the case of the former, the mental defect has been recognized and a favorable environment has been provided, but the individual at large, with his deficient mentality undetected, is obliged to compete with those better equipped than himself and almost always fails to meet the industrial adjustment possible for those under direct supervision.

In an institution for the feeble-minded, we generally find three distinct types of defectives, namely, the very low-grade feeble-minded case, commonly called the "idiot," the slightly higher type, designated as the "imbecile," and the still higher class, usually known as "moron." In our consideration of industrial relations, we are not concerned with the idiot, since he ordinarily is entirely untrainable, or so defective in motor control that he cannot be made useful and must remain typically a case of dependency. The other two types almost always can be trained to work in some way, unless there is a physical impediment.

On account of the lack of development in the more complex mental processes, as, for instance, reasoning and judgment, it is almost always necessary to adopt motor training in the education of defectives. Although verbal instructions usually make little impression on imbeciles and morons, they are easily stimulated if shown how to perform an act, and their response is, as a rule, quick and fairly satisfactory. By employing motor training, which is based entirely on the imitative response of the individual, it is possible to make them engage in an actual form of serviceable manual labor. The education of the feeble-minded is usually a combination of instruction in

*Author's abstract of a lecture delivered at New York University on February 23, 1917.

elementary school subjects, such as reading, writing, simple arithmetic, etc., and training in some fields of industry, chiefly in those involving manual work. The instruction is gradually made more difficult until the defective proves himself incapable of comprehending more advanced subjects.

It is a well-established fact that the best occupation for the feeble-minded is farm work, the most important reason for this being that farming occupations do not demand a high degree of intelligence. Other reasons are that the environment does not offer the complexity of city conditions, that the men are happier and more contented under the changing routine of rural labor, and that fresh air and outdoor exercise are conducive to good health, which so many of this class lack.

Besides farming, there are, however, many occupations in which the institutional feeble-minded can be trained and in which they can accomplish noteworthy results. Among the industries which are most commonly practiced in the different institutions throughout this country may be mentioned carpentry, basketry, chair-caning, weaving rugs, hammocks, and towels, making rag carpets, making mattresses, chopping wood, making wells, shoemaking, painting, plumbing, printing, sewing, knitting, embroidering, tailoring, laundry work, general housework, and cooking. In some institutions, manicuring is also taught, with the aim of discouraging a prevalent practice among inmates of biting their nails.

At this point an idea suggests itself with regard to the expediency of vocational guidance for the institutional feeble-minded, based on the study of their mental constitutions. Just as it is possible to analyze the mentality of the normal individual and to place him at work in the position for which he is most fitted, so should it be possible also to detect in a feeble-minded individual the inherent characteristics that make him better equipped for one occupation than for another. It is to be hoped that in the future the institutions for mental defectives will make more use of laboratory examinations in assigning the inmate to special work.

The nature of institutions makes it possible to place feeble-minded persons in a favorable environment, and, with proper supervision, to bring about a satisfactory industrial adjustment. However, when the same persons are left to themselves, they are practically incapable of earning a livelihood. As a rule, only from 10 to 15 percent of the inmates discharged ever become absolutely self-supporting.

Let us consider another class of institutional defectives, the feeble-minded individuals who constitute between 20 and 30 percent of our prison population. Nearly all of these unfortunates have engaged at some time or other in economic activity, and most of them have had a career of industrial inefficiency. They all show more or less the same characteristics—lack of a habit of industry, inability to retain a position for a prolonged period, failure to persist in a specific line of work, and want of ambition.

When it comes to the question of prison industry, it is evident that there must be some difficulty in selecting the most suitable trade for these defectives with their history of industrial failure. The psychiatric clinic of Sing Sing Prison is endeavoring to meet the problem by submitting each new inmate to a thorough examination, with the object of determining the subject's mental and physical aptitudes; he is then recommended for the particular type of prison industry for which he seems fitted. An adjustment of labor in this fashion should bring, to the prison, a reduction of waste and an increase in production and, to the individual, familiarity with a trade which he could pursue after his discharge.

We come next in our discussion to a consideration of the defective individual who is at large in the community and whose deficiency has not yet been detected by society. The majority of these defectives belong to the high-grade class, and they pass unrecognized until continued inefficiency or antisocial conduct demands attention. These high-grade morons are the most capable among the mental defectives of actually earning a livelihood, and we discover them in almost every group of applicants for employment in positions which do not involve special ability. The employment departments connected with industrial concerns are not always prepared to detect them, and one is almost certain of finding employment assigned to a large number of them monthly. As a rule, they are industrially inefficient, except in the very rare instances in which proper supervision is provided and the occupation is of such simple nature that it does not overtax the subject's limited ability.

For the purpose of determining the nature of occupations in which mentally defective individuals engage, we have selected for study 150 adult males diagnosed as feeble-minded, who have been confined in state institutions. In investigating as far as possible the industrial careers of these subjects, we learned the following facts: Of these 150 men, 37 had been common laborers; 22 had done house and hotel work, such as acting as butlers, waiters, cooks, etc.; 20 had worked as chauffeurs, drivers, and teamsters; 7 had been farmers; 22 had worked as shop hands; 5 as rag-pickers and peddlers; 7 as tailors and pressers; 30 had engaged in mechanical trades.

The following data with regard to their mental ages were determined by the application of the Yerkes-Bridges point scale; of these 150 men, 3 possessed a mentality of 7 years; 14 a mentality of 8 years; 29 a mentality of 9 years; 22 a mentality of 10 years; 69 a mentality of 11 years; and 13 a mentality of 12 years.

In correlating the mental ages of these individuals with the types of occupations in which they had engaged, we find that the subjects possessing the highest development of intellectual ability had been engaged in the occupation of chauffeurs, clothing cutters, electricians, nurses, and painters. Most of the subjects having a low-grade intelligence had been working as shop hands, farmers, laundrymen, and peddlers. Of the peddlers, not one had a mentality of over 10 years. For the group of common laborers and the group of factory hands, the average mentality in each case was also 10 years. A fairly high mentality was found among men with trades such as shoemaking, carpentry, and brick-laying.

If we use these statistical data as a basis for a conjecture, we can say that, of the adult mental defectives engaged in economic activities, 15 percent are found doing factory work. In almost every manufacturing concern, we meet cases of intellectual defectiveness, and these are, as a rule, the most costly employees to the factory. They are unsystematic in their methods of work, neglectful, and forgetful of their duties; they show little sense of responsibility, are noted for their lack of punctuality, and evince a readiness to leave their tasks, irrespective of consequences, at the slightest dissatisfaction. On account of this instability, the intellectually defective employee always causes the company an increase in the natural turnover of labor and likewise an increase in the expense of maintenance. It has been estimated that the loss which a company incurs when an employee is discharged or leaves voluntarily

after working for only a short time is about $30—a conservative estimate.

To give an idea of what the labor turnover means to a company, I wish to quote here the result of an investigation undertaken in one of the manufacturing plants of New York. The conditions in the factory were such that the number of employees discharged monthly was greater than the number of employees actually necessary for carrying on the work of the factory; in other words, to fill one position, often two or more workers had to be engaged and were subsequently discharged in the course of one month. It was found that the factory had for the past year a turnover of 108 percent, while computations showed that the normal turnover for that particular industry should not have exceeded 30 percent. The company had, therefore, an excess turnover of 78 percent, which brought a yearly loss of approximately $48,000. It would be absurd, of course, to infer that this loss was due wholly to the employment of feeble-minded individuals, but it can be safely stated that, if provision had been made by the company in question to eliminate intellectually inferior workers, the yearly loss would have been greatly reduced.

At the present time, the question of the prevention of accidents in factories is one of the most vital problems in the field of industry. Statistics show that two million men and women are injured in the United States each year in the different industries of the country. The average employer assumes that every employee is a normal individual, but, as a matter of fact, a great number of the workmen engaged in specialized factory labor are incapable of displaying normal judgment and reasoning power. Knowing that there is a large percentage of intellectually defective individuals employed in factory work and sometimes assigned to dangerous occupations, we cannot help feeling that intellectual inferiority is in a great measure responsible for the bulk of accidents in connection with industry.

On account of the increase in the labor turnover, in the number of accidents, and in the amount of faulty work produced when a proportion of the employees in a factory are mentally defective, it is to the advantage of a company to hire only those who are mentally fit for the positions and responsibilities assigned to them. The satisfactory selection of employees would require a comprehensive examination of every applicant for employment, including an investigation into his industrial and medical history, a physical examination, and a psychological test.

Besides being to the advantage of the company, it is to the advantage of the mentally defective individual that every applicant should be subjected to a severe scrutiny in the employment office. If accepted, he is assigned to a position for which he is fitted, or, if rejected, he is spared the useless exertion of trying in vain to meet the exacting requirements of a job from which he would ultimately and necessarily be discharged.

Dr. M. B. Heyman has resigned the superintendency of the Suffolk County Sanatorium, Holtsville, N. Y., to accept the position of assistant superintendent in a New York city hospital.

Mrs. Clara R. Dice, for the last six years superintendent of the Franklin Hospital, Franklin, Pa., has resigned this position to become assistant superintendent of nurses in the Lakeside Hospital, Cleveland, Ohio. Mrs. Dice is a graduate of the Lakeside Hospital and for several years was a nurse in that institution.

THROUGH BRITISH EYES

Sir Henry Burdett's Appreciation of the American Hospital Association and "The Modern Hospital"

In a recent number of his journal, *The Hospital* (London), Sir Henry Burdett gives a discriminating review of American hospital conditions, based on impressions gathered during his recent visit to this country. In the course of an account of the American Hospital Association, he is kind enough to devote some very appreciative words to THE MODERN HOSPITAL and its editors. Praise from Sir Hubert—beg pardon—from Sir Henry—is so gratifying that we are going to waive modesty and quote the article entire:

"One of the most remarkable evidences of the spread of efficiency and awakened interest in hospitals, and of developments which aim at extending and improving facilities of all kinds for the training, treatment, uplifting, and restoration of dependents of all types is afforded by the magnificent growth and extended influence for good of the American Hospital Association. In the last twelve years this association has grown from a membership of a few hundreds to one of thousands, and the attendance at its annual conference brings together representatives of all types of institutions, and, through the careful selection of subjects and of the readers of papers to introduce them, it promises soon to become of increasing practical value, directly to the whole of the workers in the American hospital field, and, indirectly, to the whole population of the United States. America prides herself upon being democratic to the core, and it is to the democratic basis on which the American Hospital Association has rested since the Boston meeting in 1906 that the association owes its ever-extending membership and widening interest and influence.

"The establishment of THE MODERN HOSPITAL, which has rapidly developed into a monthly magazine, demy quarto in size, containing some 200 pages, of which some 120 contain advertisements and eighty are devoted to literary matter, illustrations, and plans, is a wonderful instance of rapidity of growth in magazine literature. The editors of THE MODERN HOSPITAL are Dr. Henry M. Hurd, of the Johns Hopkins Hospital, Baltimore; Dr. Washburn, of the Massachusetts General Hospital, Boston; Dr. Winford H. Smith, Johns Hopkins Hospital; Dr. S. S. Goldwater, Mount Sinai Hospital, New York; Dr. W. L. Babcock, Grace Hospital, Detroit; and Dr. John A. Hornsby, who occupies the editorial offices in Conway Building, Chicago. The editors thus include the best-known and most deservedly trusted of hospital administrators in the United States. Dr. Hornsby is a very influential man, of many parts and excellent qualities. He has a way with him which makes him a model chairman of a large meeting, for he possesses the knack of keeping everybody in the best of humor, and of getting the business through with despatch to the satisfaction of everyone. THE MODERN HOSPITAL is to be congratulated upon his occupancy of the editorial chair at its central office.

"The plan of the paper is to devote the space before the leading articles mainly to the history, organization, practical work, plans, with information of many kinds relating to hospitals and institutions for the relief and treatment of disease in all its aspects. Some four pages are devoted to editorials. Ample space is given to every branch of hospital work, including the remodeling of a hospital, electricity as applied to hospitals, tuberculosis in every form and under varied conditions, current hospital literature (a strong and excellent department), and a Department of Nursing conducted by Miss Annie W. Goodrich, a most devoted and able worker, and knowledgeable, too. Then there are an immensity of special subjects, including Maternity, the Modern Sanatorium, Social Hygiene, Foreign Correspondence, a Department of Dietetics, Industrial Welfare, Queries and Answers, the Bulletin of the American Hospital Association, Book Reviews, New Instruments and Equipments, and news of the hospital field in short paragraphs spread over many of the advertisement pages.

"We hope that the removal of the editorial department to new and more suitable offices, and the increase in the staff, will, with Dr. Hornsby's usual energetic and prac-

tical assistance, speedily result in all plans published in THE MODERN HOSPITAL being reduced to scale, on the plan pursued by *The Hospital* for over thirty years. It would be a very pleasant and helpful thing if our brother editor were to join hands with us by making this change, for that would make the files of THE MODERN HOSPITAL with those of *The Hospital* indispensable to every architect associated with hospital construction. The educational effect and value which would follow cannot be exaggerated. We may take this opportunity to express our personal indebtedness for the great courtesy and help extended to us by Dr. Hornsby and the President of THE MODERN HOSPITAL during our visit to the United States last fall. Nothing could exceed their courtesy, and gratitude makes us hope that they may give us an opportunity one day to welcome them to the Old Country, and to do what we can to add to the enjoyment and practical value of their enterprise by every means in our power."

FATHER OF EUGENICS

Mendel the Monk, Working With a Pea, Pointed the Way to Better Offspring—Discovered Laws of Heredity

Gregor Mendel, peasant boy, monk and abbot of Brunn, an experimental botanist whose work in his cloister garden laid the foundation of that exact knowledge of heredity which is now being extended in many directions, was born July 22, 1822.

He died in 1882. Eighteen years later began the appreciation of his labors. His doctrines, which are called mendelism, form the scientific basis of the science of eugenics, "the science of being well born." Mendel's work made it possible for us to predict with precision whether good or bad traits will or will not appear in future offspring and to forecast with mathematical accuracy the proportion in which certain characteristics will appear and reappear.

This is important to the public health because defective persons breed defective persons, and an increased knowledge of heredity means an increased power in the prevention of the creation of degenerate and insane persons on the one hand and normal, efficient people on the other.

The population of the United States increased about 11 percent between 1904 and 1910, while the number of persons in insane asylums during the same period increased 25 percent. A single family of defectives cost the state of New York in five generations over one million and a quarter dollars.

When it is realized that not only mental but also physical traits, such as deaf-mutism, color-blindness, gout, shortsightedness, alcoholism, epilepsy, imbecility, and insanity may all be transmitted to offspring, the importance of Mendel's work to the public health and public pocketbook is readily seen.

The prevention of the propagation of defectives may be controlled by the education of parents so that they will endeavor to prevent a union of their children with children of defective families; legislation requiring a medical certificate of parties applying for marriage licenses; and surgery which aims to render defectives incapable of procreating. Indiana, Wisconsin, and California have laws permitting such operations.

The segregation of defectives has not proved practicable; in fact, in the case of the deaf and dumb, it serves to increase rather than to decrease their number.

Mendel's experiments were made with the common pea, but the principles which he deduced from his studies are applicable not only to mankind, but also to all of the lower animals, and are hence of importance to the public health worker, the botanist, and the agriculturist.

ANTITUBERCULOSIS WORK IN A SMALL CITY

Educational Work Through Local Organization—Visiting Nurses and Day Camp for Children Important Factors

Dr. Frank C. Neal, of Peterboro, Ontario, describes in the *Canadian Medical Association Journal* an antituberculosis campaign in a small Canadian city without a tuberculosis sanatorium or clinic. A few persons who were interested in antituberculosis work in 1911 formed the Peterboro Health Association, which became affiliated with the Canadian Association for the Prevention of Tuberculosis. Through the distribution of literature, public meetings, and outside and local speakers, an interest was aroused, and through a fair, with sale of health calendars and Christmas stamps, a sum of over $4,000 was realized. A tuberculosis nurse was then engaged, but a year's trial convinced the association that one nurse was not enough, particularly as that one was devoted exclusively to tuberculosis. Many persons would do without the tuberculosis nurse's care rather than allow the neighbors to infer from her attendance the fact that tuberculosis existed in their homes. A nurse doing general work would, it was thought, more easily gain admittance. Moreover, the duty of the tuberculosis nurse being to attend only to cases of that disease, she was compelled to pass by cases of other diseases which were just as urgently in need of nursing care. A nurse doing general nursing would therefore be able to report many cases of tuberculosis which otherwise would be overlooked.

Accordingly the association was reorganized. An increased membership with a small yearly fee was sought. Finance, educational, and supervision committees were appointed, the finance committee receiving a grant of $50 a month from the city council for the purchase of supplies for needy patients. A second nurse was appointed to cooperate with the first. Since many cases of disease in children were still not reached, the board of education appointed a school nurse, and very satisfactory cooperation developed among the medical health officer, the school nurse, and the health association.

In 1914 a day camp was established for children with inactive, incipient tuberculosis, contact cases, and underdeveloped, poorly nourished children. The site of the camp was a large natural park through which runs a creek. A trained nurse was in attendance to care for the children, and a cook to prepare the food. A bus called for the children at their homes in the morning. At the camp, on their arrival, they were given a light lunch and then allowed to play about for a couple of hours. At noon a nourishing, substantial dinner was served, and then the children rested or slept for two hours on cots in a huge tent. Then they were allowed to play again until time for their afternoon lunch, after which they were taken home in the bus.

The camp was suspended at the outbreak of the war, but the association expects to reopen it, and also to establish open-air rooms in the schools.

The Plainview General Hospital is a new institution at Plainview, Neb., offering accommodations to 10 patients at a time, with a possible capacity of 15. The building, with its equipment, cost $15,000 and is the result of a campaign conducted last fall by local business men and physicians to impress upon the people the need and advantages of a community hospital. Dr. Melerian, a member of the board of trustees, has donated equipment for an x-ray room. Dr. Melerian will be general superintendent of the hospital.

THE WAR
ITS HOSPITAL, MEDICAL AND NURSING ASPECTS

THE FIRST RED CROSS "RECONSTRUCTION HOSPITAL" IN THIS COUNTRY

Extensive New Jersey Estate Donated for the Use of Convalescents From War Injuries—Orthopedic and Reeducational Work to Fit Cripples for Self-Support

Elsewhere in this issue we publish the first installment of an article on the work of the Military Hospitals Commission of Canada in the "reconstruction" of war wrecks. The orthopedic treatment and functional and vocational reeducation of crippled soldiers is one of the most important branches of war relief. This is one of the departments in which we, too, must prepare speedily to meet what is before us.

The United States will have three "reconstruction hospitals" under the control of the Red Cross, where wounded men may be, as far as possible, restored to health and usefulness. The first of these has been fitted up by Dr. Fred H. Albee on the New Jersey estate of Mr. and Mrs. Charles D. Freeman, which they have donated for the purpose. The site, an ideal one, is on the Pennsylvania Railroad. The large house, built on high ground, looks out on woods and pleasant fields. Through the center runs a great hall, two stories high, 35 feet wide, and 65 feet long, with a gallery opening on it from the second floor. The x-ray and operating rooms are on the second floor, which has not required alteration for the purpose. A piazza 100 feet long runs along one side of the house, and its roof forms a balcony on which the second-floor rooms on that side open. Patients who are well enough to be moved may be wheeled out on the broad piazza or the balcony above. It is estimated that 500 patients can be cared for in the hospital, and that, if necessary, the capacity can be increased to 2,000.

Dr. Albee spent three months last year inspecting base hospitals in France. His conclusions as to the requirements for an ideal orthopedic base hospital (all of which requirements are met by the Freeman estate) are enumerated as follows in a recent number of the *New York Medical Journal*:

The site should be in the country, away from city noise and confusion, but accessible to transportation and to gas, electricity, and water mains. The elevation should be sufficient to insure good drainage, and the acreage extensive enough to allow of expansion. The main building must be spacious and the beds so arranged that each patient receives adequate air, with many large windows and ample veranda space onto which chairs and beds may be wheeled. The hospital must have modern, up-to-date equipment, including a traction fracture table, adjustable superstructures to go over beds, controlled by traction with pulleys, weights, counterweights, etc., in the position of neutral muscle pull for fractures, an outfit for supplying Carrel-Dakin solution to wounds, a thoroughly up-to-date x-ray equipment with a localization outfit for the detection of foreign bodies, a Zander apparatus room, and a supply of various materials, such as plaster-of-paris, steel, aluminum, aluminum bronze, Monell metal for making splints, braces, etc. A large athletic field, and a factory for making braces and artificial limbs are also important features. The staff of the reeducational department should include specialists in psychotherapy and muscle training.

* * * *

PLANS FOR NEW ARMY HOSPITALS

Outline of Provision Made by the Medical Department of the Army for Care of New Forces at Home and Abroad

The medical department of the army has announced that $14,500,000 would be expended in the construction of thirty-two new army hospitals. Hospital provision will be made in the United States for 5 percent of the enlisted force by the early fall, and this will be gradually extended to 10 percent. Facilities will be provided in Europe for 20 percent of any expeditionary force which may be sent over. At the cantonments in the United States, hospitals will be provided to care for 3 percent of the troops to be assigned to each camp. The standard adopted will be a thousand-bed hospital. Such a hospital with its various subsidiary buildings will require sixty acres and will cost about $500,000, inclusive of heating plants.

Each hospital will have equipment equal to that of the best institutions in the country, although the construction of the buildings will be of much cheaper quality. One type is being used for all the construction work. All the buildings are twenty-four feet wide, the length varying to meet the needs. The wards are usually 157 feet long, which is the size needed for thirty-two beds.

There will be a diet kitchen for each ward, a porch on one side and end of each ward, and a corridor connecting with the buildings on either side, which will be covered in the case of northern cantonments. About seventy buildings will be comprised in each cantonment hospital on the thousand-bed basis. In some cases two wards are joined, reducing the actual number of separate buildings, but the number of buildings will reach about seventy, counting each ward as a building.

Each hospital will have a laboratory for bacteriological and pathological work. Some special blood tests will be made at the department hospitals, which will take care of any work that the divisional hospitals at the camps cannot attend to. There will also be an infirmary for each regiment. There men not needing to be confined in hospital will report, when any condition appears which demands watching, and vaccination will be done, and the typhoid and paratyphoid preventive treatments administered.

There will be nearly 400,000 men in the National Guard camps and 500,000 in the national army cantonments—an army of nearly 1,000,000 exclusive of the regulars. Plans have been made for enlarging some of thirty hospitals used in connection with the officers' training camps. Two general hospitals at ports are being taken over by the army. Two other general hospitals are being enlarged behind these, and a number of general hospitals are being taken over or built for special treatment work. Plans for the latter phase of the work are not complete. It is announced that steps were being taken to work out plans for reconstruction hospitals, where artificial limbs will be made and fitted, repair surgery done, and the reeducation

of cripples begun to enable them to use the artificial limbs.

Each man in the new armies will have the equivalent of six or more examinations by specialists, in addition to the regular examinations as to general health condition. Leading specialists are now working out plans and personnel for the special examination work at each hospital. Every man will be examined for tuberculosis, affections of the heart, foot trouble, ear, throat, and nose diseases, hookworm and other intestinal infections, and for typhoid, paratyphoid, and other disease carriers.

* * * *

BATHING FACILITIES FOR SOLDIERS AT THE FRONT

Methods Used in the Armies of the Various Nations in the Present War to Keep Soldiers Clean and Healthy

The bathing habits of soldiers in the United States army are good, and there are no special problems to be solved with regard to the bathing facilities of our soldiers in barracks or in camps during peace times, says Lieut.-Col. C. C. McCulloch, professor of military hygiene in the Army Medical School, writing in a recent issue of the *Southern Medical Journal*. On the other hand, the Spanish-American war teaches that untrained troops suddenly placed in the field often neglect the simplest rules of hygiene. Since this country has had no experience with the mobilization of very large bodies of troops later than the Civil War, it is important to study the methods adopted in foreign armies during the present war.

The Russians, Colonel McCulloch says, were the first to attempt the solution of the problem of bathing troops by wholesale, and have apparently paid most attention to it. The bath trains said to be operated by the Russian army are invaluable within their sphere of operation. The "hut method," also used by the Russians, makes use of a peasant's hut, preferably with two rooms, one being used for dressing. The bath room is heated by iron stoves and serpentine stove pipes, over which, when heated red hot, water is poured. The linen is boiled, dried, and mended while the men are bathing, for, owing to the prevalence of typhus, the disinfection of clothing is as necessary as the bathing of the men. About 700 men can be bathed a day in such a hut. The main objection to the method is that the men are not handled with sufficient rapidity.

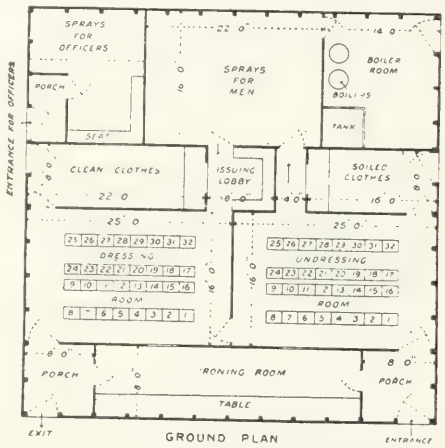
A substitute for this method is the pit shower bath devised by a French physician. A pit about 20 feet in diameter is paved with brick and roofed with sheet iron covered with sodded earth. On the roof is placed a boiler and a large tub with four outlets controlled by stopcocks, each outlet communicating through the roof with a sprinkler under which is placed a tub.

The traveling bath of the sanitary detachment of the Eighteenth Army Corps is said to have the following advantageous features: 1. While bathing, the men have their hair cut and their clothing and linen disinfected and freed from insects. 2. One hundred men can be bathed in an hour. 3. Those who have bathed do not come in contact with those who have not. 4. The waste water is run off from the floor into disconnectable gutters by which it is removed. 5. The bath is easily movable and can be set up in any convenient place. 6. The floor of the bathing pavilion is heated.

The installation consists, in the first place, of a large circular tent, about 23 yards in diameter, in the center of which is a smaller tent, the bath proper, the space between the two tents being divided into two circular corridors by a circular canvas wall suspended on uprights. The external corridor contains the anterooms of the disrobing chamber and the dressing chamber, the sterilization room and the laundry. The internal corridor contains the undressing chamber, the barber shop, the distributing room for soap and bast wisps, with a door leading into the bathing tent, and the dressing room, with doors leading out, partitioned off from the undressing and distributing rooms. The central bathing tent is floored with corrugated sheet iron inclined toward the center, water being run off by a gutter in the middle. On the surface of this iron floor and in the anterooms is placed a light wooden grating. The corridor floors are heated by iron stoves with stovepipes laid under the grating and finally out through asbestos-lined opening in the roof. The bathing tent is heated by the water-heater.

The bath can be set up and prepared for operation in three or four hours and can be dismantled and removed in less than an hour. A Russian regiment of 4,000 or 4,500 men can be bathed in two days or less by this method.

A less elaborate and expensive plan is that of the demountable transportable shower baths of the French Serv-



Portable frame bath building devised for use by English troops in the field.

ice of Coordination of Voluntary Aid for Soldiers. This costs about $100, weighs about 330 pounds, and serves from 250 to 500 bathers, according to the number of showers installed, per working day of six hours. It has given satisfaction in the field. Its disadvantages are the comparatively small capacity and the difficulty of adapting it to winter conditions.

The Russian bath trains consist each of twenty baggage cars adapted to the purpose. The locomotive is furnished with a supplementary boiler for heating the bath water and a steam pump for supplying the showers. Two tank cars at the head of the train contain water enough for twenty-four hours' use. Following are undressing cars, bathing cars, cars provided with couches where the men may rest after bathing; restaurant cars, dressing cars, and cars arranged for use as disinfecting chambers; kitchens, storerooms, quarters for the personnel, a shoemaker shop, a mending room, and even a barber shop. Each train can bathe, disinfect, and feed from two three thousand soldiers daily. The cost, exclusive of the locomotive, is about $50,000 for each train, and the cost of maintenance is

$5,000 a month, exclusive of new linen. Dr. McCulloch confesses to some skepticism concerning the scheme, although it is vouched for by a reliable French author. Similar but simpler and cheaper trains have been proposed for use in the German army, and perhaps have been put into use.

The latest English methods for bathing soldiers in the field, described by Capt. H. N. Goode in the *Journal of the Royal Army Medical Corps* for September, 1916, also pay regard to the principle of separation of soiled and clean parts. The accompanying plan shows a portable frame bath building devised by Captain Goode.

AMERICAN GIRLS SERVING THE CAUSE IN FRANCE*

The Motor Service of the American Fund for French Wounded and Its "Wonderful Chauffeuses"

Long before the entry of this country into the war, the organization known as the American Fund for French Wounded had been instrumental in relieving the sufferings of tens of thousands of wounded. Bandages, medical and surgical supplies, clothing, etc., have been given by Americans and distributed, from centers established in Paris, at Nice, Pau, Chambéry, and at other points, to the various hospitals all over France. Perhaps the most remarkable feature of the work is the transport service, maintained by

Fig. 3. Extent of French territory covered by the motor service of the American Fund for French Wounded, shown by black lines radiating from Paris.

special donations and operated by American girl volunteers, many of whom, we are told, not only give all their time to the work, but also pay for the maintenance of the cars which they drive.

No holiday service is theirs. Not only do the girls drive over all kinds of roads and in all weathers; they must also look after the repairs and cleaning and even pack, load, and unload the cars with such trifles as fifty-pound crates, boxes and bundles. Hardships and vicissitudes in plenty are the lot of these plucky workers, but it is said that nothing very serious has ever interfered with their efforts. A fire in the engine—a breakdown an hour before midnight on the roads, fifty miles out of Paris—an accident averted by hasty jamming down the brakes, which inflicted minor injuries on car and chauffeuse—such incidents as these (described in the Monthly Report of the A. F. F. W.) are all in the day's work. The way in which the routes of these chauffeuses of the A. F. F. W. have covered France is shown in the map (Fig. 1).

Fig. 2. "Boston" (a truck so called because given and supported by the Boston committee) develops engine trouble. The cars are affectionately known as "George," "Lizzie," "Eddy," "St. Paul," "Magnolia," and "San Francisco."

The life of one of these girl workers is well sketched in the letters from one of them, Miss Theodora Dunham, published in the August number of the *Red Cross Magazine*.

"Perhaps," says Miss Dunham, "you would like to hear of a day's work as chauffeur.

"Well, every morning I am over at the garage before eight, getting the key from the funny old concierge, throwing open the big wooden doors, and running out the cars to the water pipe for a very decrepit old man to wash. Then I run to the apartment for some breakfast, and am back by 8:30 to see how he has gotten along. The washing is a hasty affair, and only makes the upper part of the car a little more respectable; the real cleaning remains for us to do on Saturdays. There is always the inside of the car to be brushed out, gasoline to be put in the tank—by the way, it is a dollar a *bidon* (a *bidon* being only very little more than a gallon) now—the engine to be oiled and looked over and the radiator filled before we start off for headquarters. It's a splendid feeling to be driving your own truck down Raspail, and I thrill with pride when I cross the Place de la Concorde and look up the Champs Elysées to the Arc de Triomphe looking down at me.

The morning is taken up with errands, usually, bales of old clothes to be sent to some *vestiere*, or the doctor of the Fund to be taken to investigate some hospital. Then comes an hour off for lunch, which we usually spend at Duvals thoroughly enjoying a mutton stew, followed by a *petit suisse* and *confiture*. At two, all hands are back at work and we motor-drivers dash upstairs to find out what delivery has been assigned to us. There are cases to be delivered to hospitals in Paris, and also to those in Versailles and other places an hour's ride from the city. Of course the out-of-town deliveries are the most interesting."

Then, of the items in the necessary drudgery, she writes:

"It's a most annoying job to wash a car. Oh, the slop and the mess don't matter if only it would get clean! You go all over it with the hose, then scrub it with a brush until all the mud is off, one last washing with the hose and the car looks shiny and clean. But wait until it dries—all

*Figs. 2, 3, 4, and 5 are presented here by [illegible] the Red Cross Magazine.

the dirt that you were so sure was off reappears and the car is almost more of a sight than when you started! A good washing takes almost all morning. Then there are the twenty-seven grease cups to be filled, perhaps a fan belt to be tightened, spark plugs to be cleaned, and the whole engine wiped off. Sometimes there is an old tire to be gotten off a rusty rim, and that means an all day's work with another driver or two to help. It's strenuous work, but it's fun to laugh at a fellow-worker in overalls, with greasy, black hands, and a smutch across her face, crawling out after an hour's work underneath her car!"

Fig. 3. Stalled in a snowbank—one of the incidents that keep the life of the American chauffeuses from growing monotonous.

From Chambéry she writes:

"Since we have been down here I have had the chance to visit the hospitals, talk with the men and stay a little while, and have realized more than I ever did before, the gloomy, depressing monotony of hospital life. . . . Usually you do find one or two games of checkers, or a pack of filthy cards to a hospital, and two or three times I have seen men stringing beads and making hideous table covers of knotted silk. But for the most part the men in bed just lie there. The men on crutches lounge around, smoke and talk to each other. You can imagine, when you take into consideration that so many of the buildings are old and the walls a dingy gray, how depressing it is to be in them day after day and month after month, with horrible memories behind you, and nothing to look forward to but another turn in the trenches, another wound, the same months in the hospital, everything all over again—or else a return to a family that is struggling to keep alive, a return probably not to help, but to be a burden. . . .

"My job as chauffeur is not a strenuous one. There are nine hospitals here, all within two blocks of each other, so that I no sooner get on high speed than I have to stop, jump out, send a saluting military gentleman to find the infirmiére majeure, and when that personage arrives make my little speech, *'Bon jour, Ma Mere* or *Ma Soeur* or just plain *Madame. J'ai trois caisses pour vous de la part du Comite Americaine.* (I have three boxes for you from the American Committee), etc.' Then I am usually clasped by both hands, sometimes kissed on both cheeks

Fig. 4. Owing to lack of other labor, the girls often have to load and unload their own cars. The uniform worn by the girls in the picture is of dark blue. The military jacket is fastened with Red Cross buttons. Round the waist is worn a black leather belt, and an additional military touch is given by blue cloth epaulets bearing the letters "A. F. F. W."

Fig. 5. Miss Dunham having her first experience as an ambulancière. "They gave me another blessé," she says. "As they were taking him out his coat fell back and I saw the Croix de Guerre and the Medaille Militaire on his breast."

and taken upstairs where clothes of every description are unpacked and admired. The other day I even drank a glass of liquor with ma soeur Chlorinde up at the hospice civile!

"The poilu is a most grateful and simple person. If you pass him a box full of cigarettes, he has to be strongly urged before he will take more than one. He is usually shy, but loves to talk about his family, or any other subject, whenever you get him started. As for the work that we do over here, to him it is always *magnifique*. In each hospital either the médecin chef, or one of the leaders among the men, makes us a little speech, and the way a Frenchman can express in one sentence his feelings of gratitude and friendship, the ideals for which he is fighting, and we are working, and all the sympathy there is between us, is, to me, a continual marvel."

THE REHABILITATION OF WOUNDED CANADIAN SOLDIERS*

Work of the Military Hospitals Commission of Canada in Restoring Functions of Injured Soldiers

DISCHARGE DEPOTS

There are three discharge depots for returning soldiers at the three chief ports in eastern Canada, Quebec, Halifax, and St. John. The submarine situation and other considerations have caused frequent changes in admiralty plans regarding the delivery of hospital and transport ships, so the Military Hospitals Commission is prepared to meet arrivals at all three places. At present most of the ships arrive at Halifax, but convenience in distributing has made Quebec the real clearing hospital.

Of shiploads arriving at Halifax, all cases for Prince Edward Island, Nova Scotia, and New Brunswick are cleared at Pier 2, where a former immigration building has been remodeled, redecorated, and converted into a well-appointed hospital. All other cases are sent to Quebec by special train, attached to which are hospital cars for bed cases.

At Quebec, as at Halifax, it is the immigration department's wharf that the commission is using as a clearing hospital, Canada's only immigrants these days being her own sons returning from that new and ever-widening frontier of the Dominion "somewhere in France."

The Quebec Discharge Depot has been very extensively remodeled, runways from the boat landing, elevators, modern kitchen equipment and serving conveniences, solarium for tuberculosis cases, and isolation wards for infectious diseases and nervous cases having been provided.

In St. John 100 beds are in use in the Bank of Montreal building, close to the wharf, and a modern 450-bed hospital has been created out of the former armories. The admiralty has made fewer deliveries at St. John in recent months that at either of the other ports. The armories clearing hospital has not yet been used, but nobody can predict when it will suddenly be required.

All returned soldiers are interviewed, passed upon by a medical board, and forwarded to their proper destinations, usually the nearest hospital to their former place of residence. The boards divide the men into three classes: (1) men for immediate discharge without pension, unfit for overseas service, but capable of returning to their previous civilian occupation, or with disabilities neither the result of service nor aggravated by it; (2) men whose condition may be benefited by further medical treatment; (3) men with permanent disability who will not be benefited by further treatment and whose cases come before the board of pension commissioners.

About 70 percent of cases returning at the present time are boarded to Class 2, although at first the percentage was very little over 50. Probably at that time the possibilities of restoration were not recognized to be so great as they are now known to be, but an additional reason is that as hospital accommodation in England becomes more and more taxed the proportion of active treatment cases sent to Canada is increasing. Class 2 men are those in whom the Military Hospitals Commission is concerned. At the discharge depot their medical history sheets are filled out in elaborate detail and copies are forwarded to the hospitals to which the men are bound as a guide to the medical officers who will have to treat them. Recording officers also interview the arrivals and obtain from them information regarding their previous education, occupation, technical accomplishments, disabilities, etc., as a guide to the vocational training officers and employment bureaus whose duty it will be to assist them in getting a footing in civilian life again. It is not usual for men to be kept at the discharge depots longer than four or five days, as even a large shipload can be boarded and recorded within that time. Some of the men may leave within twenty-four hours of their arrival in port.

CARING FOR INCURABLES

Early in 1917 the Military Hospitals Commission decided that it was necessary to open a permanent home for incurable soldiers, odd cases which would be admissible having been drawn to official attention. A very splendid offer was made by the estate of the late Mrs. Lillian Massey-Treble of her former residence, in one of the chief residential avenues of Toronto, for this purpose. Instructions were sent to all medical officers throughout the Dominion to make a survey of the cases under their care and to report the number requiring treatment in a permanent home for incurables. It took several months of careful study before final returns were complete. One of the most optimistic facts in connection with the whole returned soldier question is that, although about 17,000 wounded have been returned to Canada already, only 37 were reported as eligible for admission to this home. Undoubtedly not all of the 37 will reach the home for incurables, as some of them come from wealthy families who will be glad to assume responsibility for their sons' care in their own homes.

By incurables in this sense are meant paralytics chiefly, some very mild epileptics, and other miscellaneous types from which, of course, chronic mental and nervous cases and tuberculous cases are excluded. The situation in regard to these other cases, however, is equally cheerful. In provincial hospitals for the insane there are now 46 returned soldiers, and in the commission's special institutions for nervous patients there are 40 chronic cases, making a total of 86 cases for whose recovery little hope is held. Of the tuberculosis cases being cared for by the Military Hospitals Commission, only 89 are incurable, although about 1,200 cases have been returned to Canada or passed over to the commission from military camps in the Dominion. There are nine totally blind returned soldiers and three who are going blind. Amputations are, in the one sense, of course, incurable, inasmuch as a leg or arm cannot be made to grow again, but of these even there are only 512 on the books of the commission. Canada's casualties have long since passed the hundred thousand mark, so that when these figures are compared with 17,000 of the ones so seriously wounded that they had to be returned to

*This article has been prepared under the auspices of the Military Hospitals Commission of Canada in response to a request from THE MODERN HOSPITAL.

Canada as unfit for further fighting service, fairly good insight into the situation is given.

The home for miscellaneous incurables is capable of accommodating 40 beds, and apparently that is as many as will be needed for a long time to come. A rather somber beauty characterized the rich, but dark-hued interior decorations of many rooms of the house when taken over, but the commission redecorated along its usual lines, substituting cream and pale blue tints. A lovely garden, a sun room, one of the best-stocked private conservatories in Toronto, and a $15,000 combination pipe organ and player piano are features of the home which will make the life of the inmates as cheerful as can be expected in the circumstances. Orderlies and male help will live in the coach house, the third story of the dwelling being reserved for nurses and the dietitian.

The class of scientific equipment and apparatus required to alleviate the suffering of the patients will depend entirely upon individual needs. It has not been the policy of the government to stint itself in this direction.

The proportion of nurses to patients in this hospital will be very high in comparison with the homes for convalescents, as the patients will be almost completely helpless and will require a great deal of personal attention.

NERVOUS AND MENTAL CASES

Great interest has been shown in the number of nervous and mental cases returning from the front. Wild stories have appeared in print on various occasions about men going insane under the terrific strain of the modern battlefield, and there is an impression about that hundreds and thousands of men are returning from the front mental wrecks. This happily is quite inaccurate. Various medical officers who have returned from the front, when interviewed by the writer on this point, stated that they never had heard of a specific case of a man going insane on the battlefield. The number of patients of this class for whom the Military Hospitals Commission of Canada has had to care bears out this testimony. Among the 17,000 Canadian soldiers who have returned from overseas, mental and nervous symptoms of some sort have been diagnosed in about 1,500 cases. An analysis of the 644 men in this class who returned during the first four months of 1917 shows that 72 percent of the cases were caused or aggravated by service, but the chronic cases are not within that 72 percent. Of the 644 men, 380, or 58 percent, were nervous types caused by service. These will all recover under proper treatment in suitable surroundings. In 91 cases, or 14 percent, there were nervous symptoms caused by gunshot wounds in the head. This, of course, was caused by service, and little hope for removal of the symptoms is given. Of mental cases, including insanity and feeblemindedness, there were 97, or 16 percent. These are not caused by service and usually the symptoms became obvious long before the men got near the firing line. Although no accurate report has been made on the subject, medical officers who have had to deal with these mental cases assert that few, if any, have been in action. Epilepsy and allied conditions (fits) account for 54 men, or 8 percent, and these conditions are not caused by service. There are 22 men, or 4 percent, suffering from organic diseases of the nervous system, likewise not caused by service.

Viewing the statistics just given, it is observed that of the 72 percent of nervous and mental cases caused by service, only those suffering from head injuries will not progress to ultimate recovery under treatment. It is estimated that three out of every thousand persons of ordinary population are insane. Various efforts have been made to arrive at the figures among army casualties, and, strange as it may seem at first glance, all statistical efforts to get at this result show a smaller proportion, or about 1½ to every thousand. The fact that a medical examination had to be passed before admission to the army contributes to the smaller average, and the reason there are any insanity cases at all is said to be the power of the army to draw so many youths who are really mental defectives.

The Military Hospitals Commission at first did not consider it necessary to segregate nervous and mental cases, but mixed the two in the Ontario Military Hospital at Cobourg, a former college building capable of accommodating about 140 patients. As the work developed it was decided to make the Cobourg place purely a hospital for the treatment of shell shock, and another college building at Newmarket was acquired through the patriotic gift of the religious Society of Friends, which will ultimately be the center for those suffering from mental troubles.

At Cobourg the Military Hospitals Commission is erecting four of its standard 75-bed convalescent wards in two two-story wings. This will make accommodation for close to 450 patients. A staff of nerve specialists will conduct the medical work, while at Newmarket, where the accommodation does not exceed about 150, alienists will be in charge.

By publicity and other methods the commission is seeking to remove completely from the Cobourg institution all suggestion of its being a hospital for the insane for the sake of the psychological effect on the patients and their families. The institution is called the Ontario Military Convalescent Hospital. Its work is purely convalescent. Chronic cases will be cared for either at Newmarket or in the existing provincial hospitals for the insane.

[To be continued.]

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Camel Transport for the Wounded

"'The ship of the desert' has been brought into use in the transport of the sick and wounded and trained for ambulance work in our Eastern campaign," says the *British Journal of Nursing*. "The camel in our illustration is seen carrying on stretchers two wounded 'Tommies,' who balance one another. High in the air as they appear, it will be remembered that the camel kneels to receive its burden, and then rises and strides away, covering the ground at a great pace, with a swaying movement which causes some people to suffer from sickness akin to seasickness."

From the British Journal of Nursing.
A camel ambulance.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH.
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

Administrative and Legislative Problems in Meeting Modern Demands on the Graduate Nurse*

BY ANNA C. JAMME, R. N., Director Bureau of Registration of Nurses, California State Board of Health.

In this problem of meeting demands of modern society, from both the educational and the practical standpoint, ours is not an isolated position, but parallels what is today before general educators. Like them, we must admit that there is a rapidly changing order in our social economy which is transposing social organization and producing its influence on education in general, even including nursing education. Mr. David Snedden, in the opening chapters of his book, "Problems of Educational Readjustment," affirms that there is a new education in the same sense that there is a new industrial order, a new practice of medicine, and a new philanthropy, which owes its origin to the development of scientific knowledge and to the spread of democratic ideals. Science has revolutionized nursing as it has revolutionized medicine, agriculture, and warfare, and is bringing with it a new education, which requires readjustment.

Hitherto nursing has rested on a foundation built upon the theory of cure rather than upon the theory of prevention of disease. Largely, the scheme for the training and education of the nurse has prepared her for bedside work and for nursing in the home after her graduation. Although this ideal cannot now, and probably never will, be entirely abandoned, for the nurse's function in the actual care of the sick at the bedside can never be withheld, even in changing modern sociological conditions, yet sufficient progress has been made in the evolution of nursing to convince nearly all careful students of the demand for a more purposeful, a more comprehensive, and, if I may say so, a more efficient system of preparing our student nurses in our undergraduate schools. Forces outside the field of the training school are compelling this reconstruction, both in the aim and in the methods of teaching.

As for the basic administrative consideration, this is doubtless concerned with the educational program to be carried out in our schools of nursing. The readjustment of the curriculum, giving an arrangement that will find place in the latter part of the third year for the study of sociological and community problems, may be a primary consideration. The scope of nursing education will, to a certain extent, have to be defined in terms of social economy and will have to embrace studies and practices which will deal with the practical problems of reducing suffering and waste of human life, and also the conditions which give rise to disease and moral delinquency.

Initiation of this idea has already been made, as has been demonstrated in several cities, where the nurses of the senior classes cooperated for the purpose of instruction in subjects relating especially to community welfare. It cannot be said that in any one of these courses sufficient insight has been given to prepare a nurse actually to practice a specialty, but it has served the purpose of opening the vision of the students and showing how the work of the training school should be linked with the work in the community. Even if the student never enters into post-graduate study, she is made richer in measure than if she never had had this instruction. This has been an important step in socializing our schools, also in advancing toward more uniformity of ideals amongst students, and foreshadows greater developments as our educational vision enlarges.

Heretofore the curriculum has been rigid and the student has had only a limited power of selection or none. Opportunity to show initiative or self-direction has not been her privilege. Granted that her vision should be faulty and her election not what she eventually follows, does she not gain in the very fact of exercising her power of initiative? We should, in my opinion, consider making the curriculum of the last six months of the course sufficiently flexible to fit the needs of different groups of students who will have sufficient purpose in their training to desire some special instruction in subjects that will aid them in meeting the various requirements that will come after graduation.

I do not wish the idea of election in the third year to be confused with the idea of specialization. I consider that a specialty can be taught only in a graduate school, while an elective can be made a part of an undergraduate course in the same sense that agriculture, domestic science, or art is part of the high school course.

The value of practical experience in elective work can be measured solely by the methods of administration, including the supervision accorded. It would be but another form of exploitation of the student nurse, were she allowed to give any degree of service that would not have an educational value. Practical elective work, whether in the hospital or outside of it, or with an affiliating institution or organization, should be considered as part of the course and as such should be given its proper weight of credit.

I believe we should approach the matter of practical elective work very cautiously and should not encourage it outside the hospital until proper provision can be made to place the student under constant supervision. It will necessarily cause an added expense to the training school, as it deprives the school of the services of the student and necessitates replacing her in the staff of nurses. There is also the question of the student's car fare and possibly her lunch. It should be an added expense to an outside organization rather than the benefit of another worker, for it takes the time of the supervising or clinic nurse to instruct the student; and it is an expense to the student herself, for it requires her to provide suitable uniforms.

Actual experience in elective work may be obtained either in the hospital with which the school is connected, in an affiliated hospital, or in the community itself. In the hospital the familiar forms which we have known are head nurse duty, or assistant's work, or special operating room work. These may not have been considered as elective courses, but even as nonelective have contributed to the value of the training from the standpoint of added experience for the student.

*Read before the joint meeting of the National Associations of Nurses, Philadelphia, 1917, presented here by courtesy of the *American Journal of Nursing*.

Practical experience in an affiliated hospital is also not new and has been practiced in progressive schools for at least two decades and made compulsory by state boards of nurse examiners in order to supplement actual deficiencies in the home school. Elective work in affiliating hospitals is a different proposition, and means a voluntary agreement on the part of the home school to relinquish the student for a specified time, we will say, from four to six months, and solely for the benefit of the student, as, for example, where the student from a general hospital is sent to a state hospital for the insane for the purpose of experience in mental nursing. In these cases the degree and range of instruction and practice should be definitely specified and credit given.

In the various branches of public health work, which may include social service in the hospital, the same precaution will necessarily have to be carried out, otherwise, again, the nurse may become the victim of exploitation. The detail of the method of carrying out successfully a practical elective course in public health work or community nursing will of necessity have to be adapted to the given community. Cooperation with organizations seems to be at present the most feasible means of accomplishing this. The value of the work from an educational point of view will depend entirely on the standing of the organization concerned. This should come under the sanction and surveillance of boards of examiners, and, where there is an inspector of training schools, it should be part of her duty to make routine inspection where affiliating work is carried on.

A form of administration for carrying on practical elective work in public health nursing may be possible in communities where a group of hospitals are located, and by cooperation of these hospitals an instructor may be engaged who would take charge of the course and supervise the practical work. I believe it is not possible, in a necessarily limited undergraduate course, for a student to take any definite responsibility of patients or clinics; she can be considered merely as an observer or assistant. In small communities, supervision may more easily be given from the training school.

The question of electives may not properly belong here, only in that it may bring nearer the solution of the problem as to how the individual graduate nurse shall be prepared to meet increasing demands and how to utilize practically in the community the knowledge she has gained in her hospital.

Concerning graduate study, our imagination naturally turns to the courses now offered in our various centers which are contributing very materially to enabling the graduate nurse to meet the demands placed upon her. Many nurses are able to take advantage of these opportunities, but a larger number by far are not within reach of these centers, or may not be able, for various reasons, to take advantage of this study. But there are other means. Large or small groups of nurses, either in large centers or in our small towns or even rural sections, may organize for a course of instruction in sociology, civics, history, and development of nursing and other subjects allied to their work. Nurses should enter into meetings and gatherings where they come in contact with the live issues of the day and the social and political spirit of the community. Too long have nurses felt themselves so entirely absorbed in their work that it placed them apart from others; too long have they held back from mingling with other workers and taking their part in civic affairs. The training school may assume the blame for this, if we can credit the evidence of young graduates who have no knowledge of the most intimate municipal, state, or national conditions bearing directly on their professional work.

Graduate study, to be of any value and give results, should be organized and properly directed until we can be thoroughly imbued with the thought that only by the eternal working over and renewing of the knowledge we already possess shall we be able to keep pace with social and economic changes and maintain our place in the social group. A sympathetic understanding of people and their needs can only be obtained by studying people; consequently, post-graduate study should be along the lines of sociology, political economy, and general community problems.

Opportunities for this are not lacking in any part of our country. There are the university and university extension courses and the university summer sessions; there are the high schools, the civic clubs, and the teachers' institutes. Again, there is literature in abundance if one knows how to find it and how to use it; the current periodicals and the daily press serve an inexhaustible purpose in keeping us informed as to public sentiment on civic and national questions in which the work of the nurse is often very intimately involved.

You may agree with me that the most important step in educational administration that will fit us to meet the situation as it exists today is that we should have, first, a standardization of entrance requirements of schools of nursing in the United States; second, a reorganization of the curriculum; third, opportunity for the pupil to exercise selection in the latter part of the third year; fourth, the continued encouragement of graduate study both within post-graduate institutions and by means of extension courses. In addition, there should be a greater development of educational and professional patriotism on the part of schools of nursing in their attitude toward the student nurse and to the objects of her studentship. Professional patriotism is establishing the point of view or the regard of the student for the integrity of her profession and her personal sense of responsibility for her course in the school.

There may be raised in this discussion a far-reaching problem to which I have given no attention, namely, the attitude of the people of the community toward the training school within its confines. The public is making its demands upon the graduate nurse, but is the public concerning itself with the preparation of the nurse in order that she may be able to answer its needs? It is very evident that the interests of the community will be better served when there exists a cordial understanding between the people and the school of nursing and when this school shall bear a definite relation to the general school system in the community.

As for the problems of legislation, here, again, are problems which parallel those of other educators, for who of us, listening to debates in legislative rooms on general education bills, have not been impressed with the similarity of our own position in these questions? Standards of education in no matter what line must be clear-cut and decisive before we can impress a legislative body of the need of protective or enforcing measures. Therefore the necessity that we should understand ourselves perfectly and bring to this understanding the combined wisdom of all of our activities.

We have obtained our first trench in legislative work, and now we must follow it up as well as guard it. We have established laws in forty-five states, which is but a beginning. Our next step is very apparent, that of stating in definite form what shall constitute a minimum standard

of education in all schools of nursing in the United States and placing upon this standard the stamp of our approval as a national organization. Legislation would undoubtedly be made far easier for a legislative committee were it reinforced by such a standard requirement.

Suitable legislation pertaining to nursing education is imperative, but suitable legislation pertaining to graduate nurses' work and to the work of attendants is likewise important and one in which we should now find ourselves actively concerned. I speak of tuberculosis, child welfare, and especially of school inspection legislation. Now that we have gone so far, we cannot afford to ignore all acts of legislators with which our work as nurses is so intimately associated. We must unite in our organizations to see that the utmost vigilance is obtained and be ready for the call to arms when adverse measures concerning public health welfare are threatening.

Suitable legislation for preliminary entrance requirements to schools of nursing is necessary to enable us properly to prepare the future graduate in our schools to meet the demand that is placed upon her by the public.

How One of the Smaller Hospitals Hopes to Help Meet the Need for More Nurses

BY MARY M. RIDDLE, Newton Hospital, Newton Center, Mass.

In addition to the many other problems confronting the American people and awaiting their solution is that of the depletion in the ranks of nurses, caused by war conditions and the necessity for a secondary army—an army of nurses to care for the sick and maimed on the battlefield.

The question has been discussed in all its bearings, but, however much is said and however long the debate, the truly thoughtful and unselfish always return to the same point in the argument, viz., that skilled nurses are needed as never before. They will continue to be needed in increasing numbers, and their number is now greatly depleted.

The appeal made by the Council of National Defense to the young womanhood of the country to study nursing expresses it thus:

"The situation is a grave one. We must provide the best nursing care for our army; we must carry on with undiminished energy the nursing work in our hospitals at home; we must also be ready as the war proceeds to care for great numbers of disabled men; we must increasingly safeguard health work in which nurses are engaged, especially where the health of the nation's children is at stake.

"Highly skilled nurses will be needed as never before, and in greatly increased numbers. In one way only can the loss of trained nurses be made good, and that is by training others to take their places. The others must come from the ranks of America's young womanhood, and they must come in great numbers if they are to meet the situation as it appears in all its alarming phases."

Trustees of civil hospitals, large and small, have sat in council upon this subject and have decided, most of them, upon their lines of action according to their ability and resources.

The Newton Hospital, in Newton, Mass., which is known as one of the smaller hospitals, or at least as a secondary one, having 165 beds, with a daily average of something more than one hundred patients, has felt the strain and responsibility caused by the conditions and has made some efforts toward relieving them.

Its trustees have made arrangements with the naval authorities whereby it has agreed to care for soldier sailors as needed.

The board of health of the city of Newton has placed a building at the disposal of the hospital authorities, to which fifty patients can be admitted immediately, and the equipment for the building is stored in its basement ready to be set up for use at a moment's notice. Another fifty patients can be cared for in other parts of the hospital without particularly disturbing the present routine of work or without displacing any of the patients resident in the community who would naturally expect the care of the hospital.

It was a comparatively easy matter to secure space and hospital facilities for additional patients, but to provide nursing care seemed more complex, especially in the face of the fact that graduate nurses are scarce and opportunities for housing more pupils upon the hospital premises do not exist.

Accordingly, after due deliberation and a recommendation from the training school committee, it was decided to open a house where a new class may be provided for and where the preliminary instruction may be given.

The new home has been called the annex and will nicely care for fourteen students who are to be admitted there during the week of August 12. It is, by train and a short walk at either end, about ten minutes distant from the hospital. In good weather the students may find it possible to walk the entire distance. The house is fitted with well-equipped class rooms and work rooms for both theoretical and practical instruction. The home conditions are not only comfortable, but they are refining, and it is believed will promote the happiness of the residents.

In order that the instruction in domestic science may be applied, it is intended that the class shall provide for themselves. Groups will be appointed for the various departments of the domestic work, each individual will have an opportunity to serve in each and every capacity. They will have their laundry work done at the hospital, which will also bake their bread. Otherwise they will provide for themselves. There will be no servants in the house other than the occasional day worker.

Instructors will go from the hospital for certain class work, and other teachers will come from the outside.

It is intended to make this preliminary course very complete and thorough, though it is the same as that outlined in the school's prospectus. The members of the class will have no hospital practice for some weeks; they will begin by having a few hours per day and will be admitted to the hospital at the end of the preliminary or probationary period.

The class is selected from a list of regular applicants, and they all enter for the full three years' course. When this class becomes an integral part of the training school another will be admitted and put through the same process.

If it should transpire that the hospital needs of the next six months do not call for the additional number of nurses, affiliations with some of the large hospitals in the city will be obtained to insure their thorough training. In no sense will the standards of instruction and practice be lowered.

The house will be supervised by Miss Ellen C. Yancey, who will also be an instructor. She will have an assistant appointed by the hospital. Miss Yancey is a graduate of the Boston City Hospital Training School for Nurses and has had much experience in hospital and training school work. The Newton Hospital is fortunate in being able to secure her services.

The actual expense of this undertaking is not yet known, but it should be kept at the minimum if possible, for in no case would the Newton Hospital wish to set an example of extravagant expenditure, though it does sincerely hope to bear its share of the responsibility in meeting the present and future needs of its sick countrymen, whether at home or in a foreign field.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES.
Dietitian of Lakeside Hospital, Cleveland, Ohio
Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, O.

Food in all its phases has become one of the leading topics for discussion this year. An extensive and intensive campaign is being carried on to educate those who are planning and providing for food that they may know the needs of our body and the value of food materials, and may make practical application of this knowledge. Even the one who has merely paid someone else to provide his daily fare is learning that it is not the simple process which he had fondly imagined it to be.

Information pertaining to food constituents, their value or their harmfulness under given conditions, has been available for many years, but little effort has been made to acquire this information, and we as a nation have continued the extravagant waste as well as injudicious consuming of food. More interest has been shown and more real education has been given the general public along this line during the past year than in any five years previous to this.

Domestic science, dietetics, and allied subjects are at last receiving proper recognition; now as never before is the dietitian being given her just dues. This may mean she is receiving creditable acknowledgment, or otherwise, according to her ability to meet the present situation—labor difficulties as well as food.

The department at Washington and the various state departments are furnishing bulletins and other pamphlets which are most helpful to the housewife. These are put out primarily for the housewife, though they may be adapted to use in the hospital. The information given is authentic and the pamphlets are written in a simple, concise language that is easily followed. These treat of everything from planting the seed to the serving of the cooked product.

Such emphasis was given by newspapers and other publications all over the country to the need for planting gardens that thousands of gardens were planted this year by people who never planted anything before. These will furnish a great deal of food for family use in addition to the regular supply which the truck gardener and regular producer furnishes. With the responsibility of supplying food to her European allies resting on America, every bit of food which can be produced will be needed. Extravagance or waste of anything which may be used for food is not only a personal loss, but a national loss as well. Waste in the kitchen is but a small percent of the total when we consider the loss in transportation of perishable foods, the loss in storage of foods kept until they deteriorate or spoil, and the loss of foods allowed to spoil in gardens because the supply is greater than the demand of that particular family. The producer is not allowed to forget for an instant that he is a most important factor in the economic world today. He replies by asking what does it profit him to produce a large crop and have no market for it, or have it spoiled before it reaches the market. One remedy for this is preservation of food. Food may be preserved by canning, drying, preserving in a heavy syrup as jams or jelly, pickling, and refrigeration.

Refrigeration is a commercial process which we will not discuss. The other processes are merely different methods of arresting the growth or development of micro-organisms which cause food to spoil.

Canning is by far the most generally used process for preservation of food, and with the methods now in use it is as simple a process as any. The National Emergency Food Garden Commission at Washington has issued a pamphlet which gives very explicit information about canning and the various methods used. In a paragraph referring to canning as food thrift is found the following:

"It enables the individual household to take advantage of the summer's low prices for vegetables and fruits. It effects the saving of a surplus of foodstuffs that would otherwise be wasted through excess of supply over immediate consumption. It eliminates the cold-storage cost that must be added to the prices of commodities bought during the winter. Of vital importance, also, is that it relieves the strain on the transportation facilities of the country. This phase is especially emphasized for this year by the existing traffic situation. The railroads are already overcrowded with freights. With the advent of winter there will doubtless be congestion more serious even than that of last year. All this increases the need for home canning and proves that this is a national obligation."

The same obligation rests upon hospitals as upon the household in this matter, though there are hospitals where this work is impossible, especially at this time when labor is a great problem. In state, county, municipal, or other charity institutions where patient help is available, this difficulty is overcome. When the institution has a farm in connection, it would be most deplorable not to can the fruit and vegetables as they were brought in fresh from the fields and gardens. There is always a much greater quantity of these things ripening on the large county and state farms than can be utilized for immediate consumption. Not only is this a point in food conservation, but it also furnishes to the patients and employees a greater variety and better quality of food during the winter than could be bought with the apportionment usually made for this purpose. A comparatively small amount of equipment is required, and the work may be lessened if a part of it be done each day, or even small portions canned as they are left from the day's needs. It is the more imperative that this be done in every household and hospital where it can possibly be done, because there are so many of both households and hospitals where it cannot be done.

The only source of supply of a large number of our private hospitals is the market. Even with them there is great opportunity from time to time for buying some food which floods the market on that particular day. The vegetable or fruit available is generally sold for a very reasonable price and though it may be something too ripe for canning, it may be utilized in pickles or jams; this is apt to be true of berries, peaches, and grapes. No one who has ever lived in a hospital needs to be told how much the home-canned goods are appreciated, or how much home-made pickles, jellies, and jams are enjoyed.

Drying is an older method of food preservation and has two important points in its favor; first, economy of jars and economy of space, as the bulk is much less after the evaporation of water and the dried food may be packed so compactly that small space is required in comparison to that required for canned goods; second, the process is so

simple and the transportation costs so much less that the product can be sold at a price within the reach of nearly everyone. The flavor is most desirable provided the soaking and cooking are properly done. Practically all fruits and vegetables may be dried, and in nearly every home the necessary equipment may be had with slight trouble or cost. It may be done in the sun or in the oven. Quantities large enough for use in an institution are a little more difficult to obtain than in a home.

Pickling is a very satisfactory method of preserving some vegetables and fruits, but it costs more in proportion to results obtained than the other methods mentioned owing to the high price of spices and sugars. The pickled foods are a most welcome addition to the diet of well people, but are not desirable for the sick. It is necessary that the pickles be continuously immersed, as they mold or dry quickly; they should be stirred from time to time, as both brine and sweet vinegar have a tendency to settle to the bottom, leaving a weakened liquid at the top in which the pickles may become soft, or spoil.

No attempt is made to give directions or recipes here, as so much literature of this kind is available. Besides the numerous bulletins put out by the state experiment stations and the agricultural department at Washington, the National Emergency Food Garden Commission, 210-220 Maryland Building, Washington, D. C., will send a "Home Canning Manual for Vegetables and Fruits" and a "Home Drying Manual for Vegetables and Fruits" upon the receipt of two cents for postage. These manuals give explicit directions for equipment, as well as the process, and are well worth having.

In many hospitals it is almost impossible this year to get sufficient help to do the necessary things from day to day; these institutions cannot avail themselves of the advantages of preserving food for future use. The prospect is a trifler darker for them than for those in which provision may be made now for the winter needs. This fact furnishes one more reason why all who can do so should preserve their own foods, thus leaving a market supply for those who cannot.

The *Outlook* in June set this standard for us:

"Production at its highest point, transportation and marketing efficient, no waste in the household, and not an empty can or jar in the country—this should be the national ideal. We may not realize it in every respect; indeed, we shall probably fall short of this ambition, but if we faithfully do our best, we need have no fear of the future."

The trustees of the University of Chicago have established a Science Series in which they are publishing the latest results in scientific research. The sixth in the series is a small book on "Food Poisoning" by Edwin Oakes Jordan, chairman of the department of hygiene and bacteriology at the University of Chicago.

In the first chapter Dr. Jordan discusses the extent of food poisoning and the number of conditions from appendicitis to the cases of "simple abdominal distention resulting from gorging," which are conveniently diagnosed as ptomaine poisoning; the various kinds of food poisoning; and articles of food most commonly connected with food poisoning. What he tells us in this chapter is of great interest and of value to the most scientific medical man, though written in such simple language as to be of equal interest to the layman with no knowledge of science.

Other chapters on "Poisonous Plants and Animals," "Mineral Poisons Added to Food," and "Food-Borne Pathogenic Bacteria" point out the great need for caution in use of materials for food in which these might be present. Both aspects of the use of food preservatives are given, and much emphasis placed in the need of further experiment and investigation on this subject.

Conservation of Food

BY DR. J. A. WESENER and GEORGE L. TELLER, of The Columbus Laboratories, Chicago.

[Continued from the August issue.]

In the conservation of food there are several factors which must be borne in mind. In the first place, there is no use lengthening out the food products for human consumption, unless by so doing the digestive factors and availability of the added material are fully taken into account. If by such lengthening processes you introduce certain elements which are not available as food to the human body, these, then, are not only lost from a food standpoint in other channels, but they may act as disturbing factors in withdrawing the available energy which is present. What we mean by this is that, while chemistry will show the number of heat units obtained from a definine quantity of material, the condition under which it is prepared for human consumption may change these factors very materially. While coal and fiber, when burned in a bomb calorimeter, will show heat units, they would have no value from an energizing standpoint when introduced into the human body. That is, the human body is not capable of converting these into energy.

We have heard much in the past, and especially in the present, of the wonderful nutritive value that exists in whole wheat and graham bread. From a purely chemical point of view, based upon the proximate principles present, the food value is practically the same as in white bread, but when these products are actually subjected to digestive tests, in vitro, the energy or digestive coefficient is considerably lower for these breads than for bread made from pure, refined flour. The analyses of home-made bread and graham bread, while being very similar as to the three important groups, namely, protein, carbohydrates, and fat, differ quite materially in the amount of crude fiber and natural mineral salts. Home-made bread runs about 9 percent in protein, 2 percent in fat, 56.75 percent carbohydrates, 0.25 percent crude fiber, and 1.05 percent mineral salts. Graham bread runs about 9 percent in protein, 1.8 percent fat, 51.4 percent carbohydrates, 2 percent fiber, and 2 percent mineral salts. Of the carbohydrates present in the graham and whole-wheat bread, a considerable proportion is of a nature which is not at all utilizable by the human body, as it belongs to the pentosan group, which is not digestible and yields no fermentable carbohydrates. It will be noticed that, while the protein and fat are practically the same in the whole-wheat, the graham, and the white bread, there is a material difference in the percentages of crude fiber and mineral salts, the crude fiber in the graham being practically ten times higher than in white bread, and the mineral constituents, independent of the added table salts, practically four times as high.

The mineral salts in graham and whole-wheat products are of much importance in the feeding of man, and this is especially true of the growing young. The bases, calcium and magnesium, and the phosphoric acid, which is present in the form of phytic acid, as well as a small amount of iron, are more abundant in the whole-wheat and graham product than in the white bread. On the other hand, the fiber, outside of its purely peristaltic action on the bowel, is a detriment from a purely food value standpoint.

[To be continued.]

PREVENTION OF BLINDNESS MATERNITY

Conducted by CAROLYN CONANT VAN BLARCOM, R. N.,
Secretary of the National Society for the Prevention of Blindness
Chairman of Committee on Social Hygiene of the
American Nurses' Association.

Please address items of news and inquiries regarding Prevention of Blindness—Maternity to the editor of this department, 30 North Michigan Boulevard, Chicago.

Possibilities of Social Service Work in an Eye Hospital or Dispensary*

BY CATHERINE BRANNICK, M. D., Chicago.

Hospital social service work, so-called, is now so universally recognized that there is no longer need of advancing reasons for its being. There is still, however, much difference of opinion as to the methods of introducing and conducting it. If the various aspects of the hospital's function are kept in mind and social service recognized as an integral part of the hospital machinery, methods take care of themselves.

Every hospital which undertakes the care of the sick poor has a fourfold duty—to care for the patient, to educate the physicians and nurses, to advance medical science by research and related work, and to give to the community an adequate report of its work and findings.

It is not sufficient for the hospital to offer its bare service to the poor and let them take advantage of it in their divers unenlightened ways. This is not the way in which the doctor treats his patients in his office. There he makes inquiry into the cause of the disease beyond the mere physical examination, and modifies his advice and prescription to suit the patients' intelligence and circumstances. This, of course, is impossible in the hospital, where he must see many patients in a limited time, and so the need of the social worker, or whatever she may be called, to do whatever follow-up work is necessary to insure that the patient actually gets what he sought from the hospital and what the hospital seeks to give.

In the education of the physicians and nurses as carried on in the hospital, the social basis of disease can be included only if the social aspects have been considered both in the history of the individual case and in the larger public health aspect.

In many forms of research work, as in the intensive study of certain groups, in occupational diseases and the like, investigation and follow-up work, as done by the social worker, are absolutely essential.

Hospital reports should be addressed to the public, not to the hospital's particular board of directors and its medical staff only. A hospital is essentially the laboratory of the community it serves, using the word "laboratory" in its broadest sense, and its findings should be of interest to the various community administratives, as of boards of health, industrial accident boards, etc.

The term "social service department" seems a paradox when used in connection with a hospital, as the work of a hospital, as such, is surely social service. It is only that, until the particular activity designated as social service work was introduced, the hospital was unable to carry out fully the objects for which it was founded.

From the point of view of expense, the organization of a large general hospital to include this social efficiency, as well as efficiency on the more purely medical side, may seem impracticable. The truth is, however, that the comparatively high cost of such service to date is due largely to the fact that all the work has had to be delegated to specially trained workers from outside the hospital. As medical sociology grows, much of this work will be incorporated in that of the doctors, the nurses, and the various hospital executives.

In the smaller special hospital or dispensary, whether it exists as a separate institution or as a department of a general hospital, this organization for a truly all-round efficiency is comparatively simple and the cost not at all formidable. Take, for example, the hospital or dispensary which treats diseases of the eye only. There is perhaps no better opportunity to do truly preventive work in medicine than in such a hospital, when the purely medical work is supplemented by what we call social service.

Beginning at the registration desk, since there is no question as to the department to which the patient should go, a socially trained person may admit and at the same time make a minimum social survey of the patient. The registration desk is of real importance in the smooth running of any hospital or dispensary, as here may originate many of the "grouches" which patients carry with them through the clinic, or into the ward, or even out into the community.

Within the hospital there are a surprising number of groups in which some form of social service seems necessary.

Taking first the various groups of children, one of the largest and most important is that of the children with phlyctenular keratitis accompanying a general poor physical condition, the result of faulty hygiene. Treated merely locally, this condition may, and usually does, recur again and again, until the vision is permanently affected. For the rational treatment, directed at the underlying cause, some degree of follow-up work is essential for the majority of patients applying at a dispensary, to insure general treatment when necessary and to give specific instructions in the home. Where hygiene is lacking, as it is in these cases, its principles can best be taught in the place where they are to be applied.

Although there is very little actual blindness as the result of this disease, yet there are scars of the cornea which may be very trying later in life, by limiting the vocational possibilities for the individual. Preventive work with this group is therefore more important than the severity of the symptoms in themselves suggests.

Another form of keratitis occurring in children in which the doctor's effort must be supplemented, in order to get the results at which he aims, is the interstitial variety. Here it is difficult to see how effective work can be done without some system of follow-up. These children must be kept under general treatment for discouragingly long periods, and school work, unless specially adapted to their needs, must be interrupted for many months or even years. Under the best possible treatment, medical and social, they are still sadly handicapped, but, under the hit-or-miss attendance of these patients at the ordinary dispensary, they are indeed a pitiful group.

Treatment of children with congenital cataract can be

*As the first social service eye work in this country was started at the Massachusetts Charitable Eye and Ear Infirmary by Dr. Brannick, her article on this subject has peculiar value.—ED.

made much more effective by adequate follow-up work. The long period during which these cases have to be under observation gives a good opportunity for failure or delay in return, a delay which may very seriously influence the child's normal development and education.

In the ordinary eye dispensary, the largest group of patients, consisting of those who need refraction only, is regarded as the least important, both by the hospital and apparently by the patients themselves. It is to be expected, then, that in this department the dispensary may be least efficient, in the sense that much difficult and trying work on the part of the doctors is wasted, because of the large number of patients who, for one reason or another, fail to get the glasses prescribed. The close relation between general medicine and ophthalmology holds true, not only in inflammatory conditions of the eye, but also in the many manifestations of eyestrain, though the relation of cause and effect may alternate in the two conditions, and many of these cases are among the most important treated at the dispensary.

If one considers in this group only the schoolchildren, the need of some follow-up system is apparent. A refractive error in a schoolchild, uncorrected, may result in various feelings of bodily discomfort—headache, nervousness, a general irritability—which quite apart from the defective vision itself, interfere with the acquirement of knowledge in its full significance. The knowledge acquired in school, in the ordinary meaning of the term, is of much less importance than the habits formed and the attitude toward life. Habits of inattention, of bad methods of work, acquired in school, are carried into the working life of the individual, and a child's whole attitude toward life may be modified by a habit of discouragement and failure in school.

Going a step further, the dispensary which has the child's record and understands his limitations in the matter of vision is in the best position to advise the school along vocational lines.

On the more purely medical side, follow-up work in these cases as a preventive measure, is important. This is especially true of conditions tending to be progressive, as in myopia, in which progression is often prevented if the error is corrected early and the child made to wear the glasses constantly.

The disease in which treatment by follow-up work is most distinctly a preventive measure is ophthalmia neonatorum. This has been demonstrated in many states through the working of the law which makes this a reportable disease. The follow-up work here, in its limited sense of looking after the individual patient, is especially important in the eye dispensary where treatment is given through the out-patient department. The proper method of treatment in the majority of these cases is, of course, in the hospital ward, but there are nevertheless many cases which could best be treated in the out-patient department if there were some system of insuring return of the patient and of giving instructions in the home when needed. The mere difficulty in the matter of feeding these infants in itself makes this form of treatment desirable whenever possible.

The follow-up work with this group is most important, in its larger educational aspect, in reporting to the proper public health agencies and to the community the result of the investigation of the medical and social aspects of individual cases. The work already accomplished in many states by a systematic campaign of education on this subject shows some remarkable results. In Massachusetts, where the work for prevention of this particular form of blindness has been especially active, the state commission for the blind reports that the admissions to the schools for the blind in the state show a marked decrease in the number of blind from this cause in the past few years, a decrease from 50 percent to 17 percent in the total admissions.

In the states in which this has been made one of the reportable diseases, the enforcement of the law has furnished a nucleus for educational work, but even here the eye hospital or dispensary is in the best position to give the facts which the community should know. In the states which as yet have no law touching this disease, the hospital has an opportunity, and even a duty, to initiate the campaign against blindness from this most preventable cause.

Any work for prevention must of necessity be largely a matter of education. Perhaps the best example of preventive medicine to date, in the department of ophthalmology, is the work of the United States Public Health Service in handling the cases of trachoma in the rural districts of Kentucky. The methods of the service have included an extensive follow-up system accompanied by other means of popular education, and the results show the efficiency of these methods.

Among the adult patients, one of the most important groups, from the point of view of preventive medicine, is that included in the cases of industrial accidents and occupational diseases, the result of systemic poisoning or merely excessive eyestrain. As individuals, the members of this group need more than purely medical attention to conserve the remaining sight—they need help in choosing the right occupation for the future. As a group, they are especially important in the larger aspect of prevention, in that they can be used to point the moral of prophylaxis of eyestrain and injury, and to bring about protective legislation.

One might continue indefinitely grouping the patients according to the eye disease, and would probably find in each group some need of supplementing the purely medical work, though the need is obviously greater in some groups than in others. In addition, follow-up work will be indicated in many cases, not because of the nature of the disease, but because of the nature of the patient or the purely social aspect of the case.

It may appear that a follow-up system, to cover these various groups and individual cases, would have to be an elaborate one. In practice, however, much of the work may be done through hospital routine, in improved methods of history-taking and record-keeping, and much of the actual work of follow-up can and should be done through public health and other medical social agencies in cooperation with the dispensary. Here, however, there is a tendency in practice to ask cooperating agencies to do work that really belongs to and can better be done by the hospital, and it too frequently happens that the patient comes to the ground in the midst of overmuch cooperation. The importance of this is not limited to the work for the individual patient, but is equally important in the educational aspect of medical-social work, as conclusions, medical or social, should be drawn only from case work that is well done.

Prevention of Blindness in Pennsylvania

The board of directors of the Pennsylvania Association for the Blind have voted to employ one nurse who shall devote all her time to saving sight. A member of the board has agreed to provide the salary and expenses of the nurse for a year in order that the venture may have a fair trial.

INDUSTRIAL WELFARE

FOLLOWING A VISION OF BETTER MEN AND WOMEN

How Montgomery Ward & Co. Are Rapidly Expanding Those Departments Which Concern the Welfare of Their Employees

BY FRANCES KIRKWOOD, Educational Department, Montgomery Ward & Co.

"Welfare" in the three plants of Montgomery Ward & Co. means, primarily, all those special devices of the educational, medical, welfare and employment divisions, and their related divisions that have for their only purpose the self-improvement of the employee. The greatest service of these divisions is that they are penetrating currents of association between all the departments in the house. It isn't possible to detach any special achievement and say: "This is the work of the welfare department." The welfare department would be the first to resent any such singular isolation. Every operating superintendent in the establishment is a welfare head, for his department, by virtue of his responsibility for the people in his care; and the special welfare departments are agents for the better service and the more direct response of those employees. If he is capable of any sustained perspicacity—and he must be if he keeps his job—he soon learns the effectuality of consulting with these departments in cases which he cannot adjust alone. He learns that the anemic girl works better if under the physician's guidance; that the morally indifferent girl is a case for the welfare head's kindly assistance; that the ambitious youth finds stimulus to better things from the work and ideals of the evening classes. He learns the absolutely direct relationship between his labor output and the health and moral outlook of his employees. He learns that his vigilance works two ways, for keeping his men and women fit means infinitely more to themselves than to anyone else, even though his object is, first of all, better service for the firm.

The positive proof that executives of Montgomery Ward & Co. realize and utilize these—shall we call them "auxiliary" departments?—lies in the growth and expansion of the departments themselves. Keen-sighted business men are not interested in the systematic development of institutions whose purpose is mental anesthesia to employees and outsiders. Moreover, a department maintained for appearances is planted in a conspicuous corner with a bay-tree or a palm marking the entrance—and it *doesn't grow.*

The employees of Montgomery Ward & Co.'s various plants are truly large families. As you know, practically all mail-order shopping is done from the catalog, at home. Comparatively few customers come to the store and these do not enter the operating divisions except with attendant guides. Employees, not having the interruption of outsiders, are very intimately associated; this results, not only in a greater interest in each other, but also in that same closeness of feeling for the establishment that you have for your home town, your school, your college. And doubtless the rather paternal care which executives give their people is a result of the same emotion that inspires the town fathers or college professors.

These welfare departments—we speak of them collectively for convenience—are the direct expression of the constructive spirit that is obvious in all the Montgomery Ward & Co. houses. It speaks in the watchful care of sanitary kitchens and restaurants located on the bright, cool top floors, where variety in menu is achieved at a very nominal cost for thousands daily; it speaks in libraries, recreation rooms, tennis courts, baseball fields; in weekly inspections of working conditions; in corps of men and women employed in constantly improving those conditions; in countless little things such as the lending of umbrellas in case of sudden rain, dry clothing for those who are caught unprotected by the rain en route to work—their own clothing being dried for them in the engine rooms—in drinking fountains supplying distilled and cooled water; in ventilating and sanitary devices. These are but a few of the indispensable steps in the striving of Montgomery Ward & Co. for the highest human efficiency.

These are generalities—and you want special information. In the following paragraphs we are writing about the Chicago house of Montgomery Ward & Co.; any statistics given are for the Chicago house alone, but the methods employed are the same in the three plants.

There is no welfare feature more important than that which cares for the health of the employee. The medical department in the Chicago house was established in 1902 with one physician and one nurse. At present there are three physicians—the consulting surgeon, who is staff head; two resident doctors, and four nurses, one of whom is a visiting nurse. Each plant is equipped with offices and a small emergency hospital.

Every applicant for employment is given a preliminary examination. If he is employed this is followed in three weeks by a more thorough physical test. All emergency cases are cared for in the plant hospital. Employees who have been with the firm one year or more are given attendance of doctors and nurses at their home, ambulance and hospital service if necessary. Hospital care is provided for operations and non-surgical illnesses requiring it. In the office of the Chicago plant in 1916, attention was given more than 20,000 cases; there were 186 hospital cases and 95 operations.

There are few serious accidents in a mail-order establishment, but in departments where girls are closely associated in clerical labor there is always danger from contagious disease. Of course, the most dreaded of these is tuberculosis. This was the original reason for instituting the serving of malted milk twice daily to anemic employees—at 10 a. m. and 3 p. m., when energy is at lowest ebb. A 12-ounce glass, double strength, is given, free. Its great cost to the company is more than offset by the results in health and energy.

The dental department is independent, but coordinate with the medical and welfare divisions. This department is presumably self-supporting. Advice for care of teeth and examinations are given free; further work is done at cost of materials used, on the company's time without loss of wage to the employee. "Campaign against the low-priced quacks" is the first slogan of the dental depart-

ment head. In the Chicago house there are five dentists and one assistant nurse.

If you have ever been tied down for any length of time to uncongenial work you will appreciate the vocational guidance departments of the Montgomery Ward & Co. houses. Through various psychological tests these departments successfully place men and women in work to which they are naturally adapted.

The office of the welfare department is centrally located, in close proximity to the medical and dental offices, the rest rooms, the silence-rest room, the library, and the recreation hall. If you should come to visit, come at noon; then will you see the welfare department at its happiest and best. An especial feature is the Friday noonday Fellowship Meeting for girls, where they all gather to sing, and listen to brief inspiring talks by well-known men and women from the world outside.

The welfare head spends a good part of each day in personal consultation with men and women who come to her for assistance or advice. Through her wide interest, she is able to influence tremendously the trend of the lives of these people. Under her direction the visiting housekeeper makes her daily calls, reports conditions, plans solutions of family problems. A doctor's care, a supply of groceries in time, a new apartment with air and sunshine—these are some of her daily tasks in conjunction with the visiting housekeeper. Within the house she keeps in touch with every department superintendent, consulting with him or her in cases that arise in their respective divisions.

The most delightful of all the welfare and educational features are the evening classes. These meet four nights weekly, after working hours, from five until eight. A lunch is first served in the restaurant; then follow classes in gymnasium, English, typewriting, comptometer, dictaphone, shorthand, spelling, arithmetic, mail-order correspondence, sewing and social dancing. Classes for men meet on Tuesdays and Fridays; those for women on Mondays and Thursdays. Records are kept and students promoted in their day work according to their merits as shown by these records. Not the least of the success of these classes is the spirit of fellowship, the close friendships, the inspiring zeal with which they are attended. The welfare head gives a fifteen-minute talk before the assembled students each class evening, and she feels that this is her finest opportunity for extensive personal touch with the girls in the company's employ.

A plan now under way in which the welfare department of Montgomery Ward & Co. feels great pride is a vacation plan for girls—a farm in some desirable locality, with cottage accommodations, tennis courts, bathing, hiking, canoeing, dancing—a glorious two weeks of out-of-doors in summer for every girl in the house, at a nominal cost of not more than $12.50 for the entire trip.

Just now this department is active in the equipment and training of Red Cross first-aid classes for the girls and a sanitary training corps of men. Equipment is provided by the company, lectures given by the consulting surgeon, and students are privileged to attend his operations at the Hahnemann Hospital. The Red Cross auxiliary is made up of girls who volunteer their time after working hours for the making of hospital accessories, the company furnishing materials and instructors. The men's sanitary corps has over forty members; in case of extreme need, Montgomery Ward & Co. will be able to give an adequately trained, fully equipped corps to the U. S. service at a cost of between $4,500 and $5,000.

Does it pay? It certainly does. From the standpoint of the firm it is evidenced by the alacrity with which executives plan for it more and more extensively, through their assurance of its worth from successes already achieved. Of the employees' standpoint the firm can judge, of course, only from attitude, from the quality of response, from the reciprocating loyalty that makes itself felt in an all-pervasive atmosphere of interest and pleasure in their work.

And you just *know* it's right—that big ideal of Montgomery Ward & Co. that is back of it all for the instillation and fostering of more self-respect, more self-dependence, and the subsequent self-realization in every man and woman in the company's care.

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A RETIREMENT PLAN FOR SUPERANNUATED EMPLOYEES

Colorado Fuel and Iron Company Announces Plan for Retiring Old Employees on Pension

The board of directors of the Colorado Fuel and Iron Company has recently announced a plan for retiring employees who have grown old in its service. It has not been the policy of the company to dismiss employees on account of advancing years. The practice has been, on the contrary, to provide suitable employment or to make other special provision for those who had grown too old for their accustomed work. The new service retirement plan is an outgrowth and enlargement of that practice.

Compulsory retirement is provided (except in special cases, at the discretion of the retirement board and the board of directors) for all men employees of 65 and all women employees of 55 who have been twenty years or longer in the service. Men aged 60 and women aged 50, if they have been thirty years or longer in the service, may be retired at their own request or in the discretion of the board. The board also has discretion to retire on special allowance any employee who has been fifteen years or longer in the service and who is permanently incapacitated for any work, or any employee who has been at least twenty years in service if advancing age renders such retirement advisable.

The regular monthly allowance is to be 30 percent of the average pay per month of service during the ten years immediately preceding retirement. Thus a retired employee whose pay has averaged $80 per month for the ten years before retirement will receive $24 per month as a retiring allowance. No regular allowance, however, is to be less than $20 a month. The amount and duration of all special allowances are to be determined by the board.

In the discretion of the board, payments may be continued for a limited period to widows and orphans. To insure that employees shall not lose the benefits granted them, no assignment of payments will be recognized or permitted; nor will allowances be liable, before payment, to claims of creditors or attachment for debt. The grants being purely voluntary, the board may withhold, suspend, or terminate them for misconduct, violation of law or of the rules of the board, or for other causes sufficient, in the judgment of the board, to warrant such action. The board may, if it thinks best, pay the allowance to some other member of the family.

In order that all employees hereafter engaged may have an opportunity to qualify for a grant by twenty years' service before the age of 65, the time for compulsory retirement, no new employees over 45 years of age will be employed.

DISPENSARY AND OUT-PATIENT WORK

Conducted by MICHAEL M. DAVIS, Jr.,
Director of the Boston Dispensary.

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

The Function of a Dispensary*

BY JOHN E. RANSOM, Superintendent of the Central Free Dispensary, Rush Medical College, Chicago, Ill.

From the point of view of community welfare work, the most evident function of a dispensary is to provide efficient medical service to people who are unable to pay for the services of private physicians and whose illnesses are of such nature that they can come to the dispensary from time to time for treatment. The dispensary differs from the hospital primarily in the fact that its patients usually do not need the constant attention, bedside care, institutional control, etc., which make hospital care necessary. Putting it another way, we may say that dispensary patients correspond to those who receive medical attention at the office of a physician rather than in the operating room, in bed at home, or in the hospital. Of course, this must not be taken to mean that the medical needs of the dispensary patient are not of serious import.

Most dispensaries are organized on the basis of special clinics or departments. This means that if a patient is suffering from a throat condition, he is examined and treated by a throat specialist; if he has eye trouble, he is seen by an oculist. If his illness is one difficult to diagnose, he is seen by several different specialists, and his treatment determined by what they find to be the nature and cause of his malady. The better dispensaries are so equipped that good diagnostic work can be done except in those cases in which observation in a hospital is necessary to arrive at a diagnosis. If it be found that a patient needs hospital care, the dispensary should be able to see that he gets it.

This form of medical organization, termed "group practice," is thought by many physicians to be the form which the practice of medicine is likely to take in the future. In fact, the far-famed Mayo Clinic at Rochester, Minn., is a great dispensary so far as organization is concerned. Thus, from the point of view of organization we may say that a dispensary is usually well equipped to perform its function so far as the medical treatment of sick people is concerned.

But the dispensary has other functions besides those bearing directly upon curative medicine. It can have a large part in the community's preventive medical program. To a dispensary come many patients who are in the incipient stage of their illness. A man, let us say, has laid off from work for a day because he is not feeling well. He comes to a dispensary and there finds that he is in the incipient stage of some disease which, if allowed to develop and become chronic, will eventually incapacitate him for work. He may, by making certain changes in his mode of living, his work, etc., have adequate medical care and be restored to health. This may mean that he will have to quit work for a while, have preventive convalescent care, etc. On the other hand, he may go on with his work, continue to live under the conditions which have produced his illness, and eventually either live through a period of incapacity due to his disease, or die prematurely from it, or do both.

To give this man the preventive treatment he needs at the time his condition is first discovered will cost money. It may mean that a relief organization will have to put money into the support of a family whose wage-earner is not really very sick and who can work, and who probably would rather work than accept charity. It may mean that if we are to do what we ought to do for this man and hundreds of others like him, our facilities for preventive convalescent care will have to increase and develop greatly. But if this work is costly, what shall we say of the alternative course, which usually means waiting until nothing can be done before we attempt to do anything?

Education in personal, family, and community hygiene should have a larger part in the program of our dispensaries. Diabetics, cardiacs, consumptives, syphilitics, and gonorrheics need instruction not only in how to help cure themselves, but, also, in case of the last three types of patients, in how to avoid being a menace to the health of other people.

With the increased carefulness on the part of industry in the selection of employees, we are finding a growing group of rejected applicants for work, discarded because of some physical handicap which makes them less desirable workmen than were they physically sound. What some of these handicaps are may be seen from the following queries from a questionnaire which is being sent out to a large number of industries: "Do you accept applicants for work who have hernias, flat feet, varicose veins, who are blind in one eye, who have lost any part of an arm or leg, who have tuberculosis, organic heart disease, nephritis, high blood pressure, who show signs of syphilis?" Then comes the question: "What suggestions do you make to applicants who have any of the above handicaps whom you do not accept for employment?"

Some of these applicants who are rejected in one place find employment in another, depending on the type of physical impairment they present, on the condition of the labor market, and on the care or lack of it exercised by employers in the selection of employees. Others do not find work. We have seen in a comparatively short time several men who are breaking down morally because they cannot find work on account of some physical handicap. They were giving up the fight. They felt that the world was against them and that there was little use of trying. It will probably be only a question of time before some agency, charitable or correctional, will be trying to solve the complex problems some of these men will present. Some of the conditions which lead to rejection yield to medical or surgical treatment.

At the Central Free Dispensary in Chicago we are making a special study of rejected applicants for work. Several firms are referring to our evening clinic in Industrial Medicine and Surgery all of the applicants they reject on account of physical handicaps. We are studying these men and outlining remedial measures. For those who need hospital care we are arranging that. Some need only industrial adjustment or readjustment. It is our purpose to help this group obtain employment in which their handicap will be the least possible hindrance to efficiency.

*Extracts from paper read before the Chicago Council of Social Agencies.

In the field of social hygiene, the dispensary has important contributions to make. Especially is this true because syphilis and gonorrhea are usually amenable to ambulatory treatment. Our immediate problem with these diseases is that of cure and of rendering the patients non-infectious. Our work should not end here, however, but should include the education of patients in the protection of themselves, their associates, and their families, present and prospective, from the ravages of the so-called venereal diseases.

In the education of prospective mothers in proper prenatal procedure, in providing adequate care for many who are to be confined in their own homes, in emphasis on the value of infant life and on the superiority of modern scientific care of babies and children over the traditional methods so productive of infant mortality, dispensaries have another important function.

A dispensary may be a valuable institution in a community, not only because of what it is doing, but also because it can be utilized for still further service in promoting community welfare through conservation of health. In a sense it is a laboratory in which needs are discovered and analyzed. One of this community's needs, as demonstrated over and over again in our hospitals, dispensaries, and relief societies, is for greatly increased facilities for convalescent care.

In the first place, there are many patients discharged from our hospitals whose recovery will be retarded if not prevented because they cannot receive in their homes proper convalescent care, and because they cannot be relieved of household and other responsibilities which they are not yet strong enough to bear.

In the second place, we have great need for preventive convalescent treatment. There are coming to our dispensaries daily men and women who are breaking down in health because of the heavy loads they are carrying, the lack of proper food, unfavorable home conditions, and the like. Many of these need rest, fresh air, and good food rather than medicine. Some of them are just beginning invalidism, which, if unchecked, eventually renders them and their families dependent upon charity for their support. Our dispensaries can furnish to the community evidence of its great need in this direction. When the community has been sufficiently educated and spurred to action in providing the needed convalescent facilities, our dispensaries may well be utilized as receiving stations for our convalescent homes.

Such are some of the functions of a good dispensary.

Box Files

If an unkind word appears,
File the thing away.
If some novelty in jeers,
File the thing away.

If some clever little bit,
Of a sharp and pointed wit,
Carrying a sting with it
File the thing away.

If some bit of gossip come,
File the thing away.
Scandalously spicy crumb,
File the thing away.

Do this for a little while,
Then go out and burn the file.

—John Kendrick Bangs.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

Hospital Organization. F. G. Murphy, M. D. Jour. Iowa State Med. Soc., 1917, VII, No. 6.

Dr. Murphy believes that in towns in which there are two or more physicians there should be mutual division of labor and that the spirit of the profession is now especially favorable for such division into groups. Each group, he believes, should have a recognized surgeon, internist, eye, ear, nose, and throat specialist, urologist and bacteriologist, who in some groups might also act as roentgenologist. As expert team-work is a comparatively new plan, there are few precedents to follow and each team probably will need to work out its own system. The internist is a very important member of the group, for the more expert he is the fewer the number of surgical operations necessary. It will not be necessary that every patient who consults one member of the group should be seen by every one of the team. The patient should be put to as little inconvenience as is consistent with thoroughness. The important consideration in group diagnosis is that it be thorough and relatively inexpensive to the patient, and that the services of every member of the staff be available when desirable.

A Prison Eye Clinic. Frederika Farley, R. N. Am. Jour. of Nursing, 1917, XVII, No. 8.

In April, 1916, the Mutual Welfare League of Sing Sing Prison appealed to the New York State Commission for the Blind for aid for a colored inmate, about to be discharged, who had completely lost his sight during his seven-year confinement. At the same time the commission was asked by relatives of another man, who was rapidly losing sight, to attempt to obtain for him a pardon from the governor, so that he might be sent to a hospital for treatment to save his sight.

These appeals resulted in the asking and granting of permission from the prison authorities to conduct an eye clinic in Sing Sing for the inmates. The clinic started in April. The junior member of the commission's board of ophthalmologists volunteered his services for this clinic, with the aid of the commission's social service nurse.

The prison hospital equipment was found to be excellent and only a few extra instruments were required for the special work. It was arranged that the nurse should see all new patients, take their histories, and, with the aid of an inmate who understood refraction, do the simple refractions each Friday. On this day she would also see all old cases that needed treatment and give it to them. Then on Mondays the doctor would see all these new cases and all old ones that had to return for further examination. The doctor is able to see and thoroughly examine eighteen or twenty men in the two hours he spends at the prison, and cases there can be followed to completion.

At the time Miss Farley's article was written, 135 patients had been examined; there had been seven operations, four patients were awaiting operation, and many had been referred to the nerve, nose and throat, ear, and dental clinics.

There has been a surprising lack of infectious eye conditions. With the exception of two infectious cases appearing in men newly admitted and immediately placed in quarantine, the cases were made up of acute iritis, chronic iritis, glaucoma, detached retina, optic atrophy, pterygium, hyperopia and presbyopia, myopia, and six injured eyes which required enucleation to preserve the sight in the uninjured eye.

Glasses are supplied by the state when the men cannot pay for them themselves. Through a friend of the prison it has been possible to supply first-class artificial eyes to all the men who have need of them.

The prison officials have in mind a very complete hospital department, and, as soon as all the acute cases are seen to, a routine examination is to be given to every man in the prison to check, if they exist, any hidden eye defects. The workers in the various clinics now organized are giving the commission generous cooperation.

The Hospitals of Kansas and the Kansas Hospital Association (President's Address). S. Murdock, Jr., M. D. Jour. of Kan. Med. Soc., XVII, No. 6.

Dr. Murdock says that small hospitals have been established in Kansas in the majority of counties. He has visited many of them during the past year. They are usually located in a resident property with a doctor's office, a room equipped for operating, and an x-ray room. The kitchen department is handled in the same manner as in the private home. A trained nurse with one or two understudies is in charge of the house. That is a description of the small hospitals which applies to the larger hospitals, except that the kitchen department in the larger institutions is handled on a larger scale and more in accordance with hotel methods. In small hospitals the absence of the pathological laboratory is conspicuous. In the larger hospitals there is usually a room set aside for pathological laboratory carefully locked up and not in use. Dr. Murdock expresses great respect for the men of the state operating small hospitals. They are, he says, doing splendid work and raising the standard of the profession. He recommends team-work where possible, with quarterly meetings of the staff and with unequivocal action against the practice of fee splitting. He emphasizes the necessity for the organization of hospitals in one association.

A Study of the Problem of the So-Called Defective Delinquent and What Has Been Done in Massachusetts. L. Vernon Briggs, M. D. Boston Med. and Surg. Jour., 1917, CLXXVI, No. 11.

The term "defective delinquent" is perhaps a legal rather than a medical term, though the intention in coining it was to bring together the two divergent points of view, the medical and the legal. It is intended to apply to a class that is not defined by the terms "mentally ill," "feeble-minded," or "criminal." Such persons are unsuitable subjects equally for state hospitals, for correctional institutions, and for life at large in the community. In the hospitals, they are incorrigible trouble-makers; in prisons, they prove apt pupils in crime and invariably return after parole or discharge; in the community, they recruit the ranks of the vicious, alcoholics, paupers, and prostitutes. Surveys of the population at the Bridgewater State Hospital and of the Massachusetts State Prison at Charlestown brought out that a certain percentage of the inmates in each case came under the "defective delinquent" classification.

Dr. Briggs says that these defectives are to a great extent creatures of habit. One is always stealing, another setting fires, another sexually immoral. "A careful study of the individual would probably lead to the selection of an occupation or trade as an avenue which would take that person out of chaos into a useful and happy life." Dr. Briggs suggests a plan along the following lines:

This group should be segregated in a separate building or buildings, where the members may be individually studied medically and educationally. The institution should be under expert medical supervision, but should be called a school or training school rather than hospital or any name suggesting custodial treatment. The organization should include one or more psychological and vocational experts and social workers, and a pathologist. Well-equipped laboratories should be a part of the plan. Instruction should be given in the three R's, ethics, hygiene, manual trades, and domestic arts. A school of this kind, Dr. Briggs thinks, should be able to graduate into the community a number of its pupils each year, who should then be under the supervision of the social worker. Many will never graduate, but all should be given the opportunity to prepare themselves to go out into the world and make good.

After all is said and done, however, the trend of modern criminologic and psychiatric work is preventive rather than curative. Defective immigrants should be turned back at the port of entry. More important even than measures for the reclamation of defective delinquents would be careful yearly psychological examination in the schools, which would detect many defectives before they have become delinquent, thus permitting treatment or adjustment to a suitable environment.

Some Hospital Problems. Lawrence W. Littig, A. M., M. D., M. R. C. S. Jour. Am. Med. Assn., 1917, LXVIII, No. 13.

The hospital which places its wards and its operating rooms at the disposal of all alike, says Dr. Littig, is a menace to the community. He qualifies this statement by saying that his remarks apply to the open hospital as usually conducted in communities of from three thousand to one hundred thousand inhabitants, not to large city hospitals or to hospitals connected with medical schools. Most open hospitals either have no staff at all, or have a nominal staff which meets "once in ten years," or "when a row is on." The great characteristic of the usual open-hospital staff, in Dr. Littig's opinion, is an all-pervading inertia, the most effective barrier to progress. The evils of the open hospital, moreover, do not appear to be self-limited; there is no promise that they will be corrected from within. Publicity is the only sure corrective. Investigation and classification of hospitals promises splendid results.

"Closed hospitals," says Dr. Littig, may be undemocratic; they may not promise the best for either the profession at large or for the general public; but somewhere between them and the wide-open hospital there will be found a plan which will give every properly trained and right-minded man an opportunity to work out his destiny, and which will protect the community. The open hospital must be transformed into a restricted hospital, and by a method that is fair—such a one as this: When a properly trained but untried licensed practitioner asks to use the operating room, the answer will be: 'Yes, but like every other man operating in this house, you will bulletin your

operation the evening before. The superintendent of the hospital and one or more staff members may be present. You are on trial, but so long as you have any privileges here, you will have all the privileges. You are welcome in the operating room when others operate, and at the weekly staff conferences. If your work is satisfactory, you may come again, and after a few years you may be elected to staff membership. But if your work is not satisfactory, why, we shall regretfully inform you that we have no unoccupied beds. This is not a closed hospital, but it is a restricted hospital.'"

Among the agents of publicity which will aid in the reform of hospitals are the American College of Surgeons, the requirement of the hospital fifth year, and the registration of nurses. Even the possibility of investigation by the American College of Surgeons has produced good results, Dr. Littig says. The requirement by medical schools and state examining boards of the hospital fifth year cannot fail to make its influence felt even more sharply. When this requirement comes into effect, it will be necessary for both medical schools and state boards to investigate hospitals seeking interns as to the character of the work done. Another opening which will enable state boards to investigate and largely control hospitals is the registration of nurses from the hospital training school. The board which examines and certifies young women for registration as nurses has the right to investigate the work done by the hospital where they were trained. The state board cannot classify hospitals, Dr. Littig remarks, because the friends of a discredited hospital would immediately rise in arms, would term the action of the board arbitrary and unfair, and would soon set in motion political machinery embarrassing to the board. But, if candidates for nurses' registration fail to meet requirements, the examining board may send them back for an additional three months' or six months' preparation, and neither the hospital itself nor its friends could protest without directing attention to the shortcomings of the training school.

Incidentally, Dr. Littig protests against the injustice with which a young woman is treated who realizes early in her course of training that she is not receiving satisfactory instruction. "Let her try to gain admission to some other school, even if willing to forfeit the time spent in training, and she will apply to many before attaining her object, if she succeeds at all." Dr. Littig quotes a hospital director (a physician) as saying that the American Hospital Association might well consider this matter.

Hospital Care in the Province of Pavia (L'assistenza ospitaliera nella Provincia di Pavia). Dr. L. Dori. Osp. maggiore, Milano, 1917, V, No. 1.

The province of Pavia with a population of 517,589 inhabitants has eighteen hospitals with 1,275 beds in all. Less than fifty physicians are employed in these eighteen hospitals. Only two-thirds of them are exclusively employed in the hospitals; the others have their private practice besides. In the hospital of Pavia there is one physician for every twelve patients; in the hospital of Stradella one physician attends to thirty-three patients. The average annual expense for each bed is 1,500 francs (about $300). There are no special tuberculosis hospitals in the province. Tuberculous patients are placed in the general hospitals and only in three of the latter have special divisions for tuberculous patients been established. The author concludes by stating that while hospital care in the province of Pavia is entirely insufficient, it is superior to that in many other regions in Italy.

The New Building of Indherred Hospital in the Northern Trondhjem District (Ombygningen av Indherred sykehus i Nordre Trondhjem's amt.). Dr. O. Tandberg. Tidsskr. f. d. Norske Laegefor., 1917, XXXVII, No. 5.

The Indherred Hospital was built in 1842. It was a wooden structure with room for 50 beds. For many years past it was overcrowded. In 1913 the district decided to erect a new structure in a line and connected with the old building. It was completed in 1916, and is a substantial three-story stone building capable of housing 60 patients. The three stories are traversed in their full length by a central corridor. An isolation pavilion for infectious diseases contains two sick rooms with four beds each. The total expenses for the new structure were 315,500 crowns ($47,325).

Apparatus for Writing With the Knee. Arthur T. Blachly, M. D. Jour Am. Med. Assn., 1917, LXVIII, No. 23.

Dr. Blachly describes an apparatus designed to permit persons who have lost their hands, or the use of them, to write legibly with their knees. The apparatus consists of a piece of sole leather fastened to the knee by strong brass springs on which is fastened a pencil by means of two clips, such as are used in holding a pencil to the pocket. The paper is held in front of the writer by means of a small rack like a music rack. In writing, the heel is raised and the foot, resting on the pulley, gives the knee quite a wide range of motion. A stylographic fountain pen can be used as well as a pencil. The device, it is said, is inexpensive. The model cost $1.50; if the springs were replaced by straps the cost could be reduced to $1.10. The method would appear to be more convenient than holding a pencil between the teeth or toes.

Opening of the First Antituberculosis Sanatorium at Biassono (L' inaugurazione del primo asilo antitubercolare a Biassono). Ospedale Maggiore, 1917, IV, No. 10.

Children of tuberculous parents are so easily infected with tuberculosis that the only means to protect them against infection is to remove them from their dangerous surroundings. But even after infection has taken place the lives of the children can be saved if they are placed in healthful surroundings. For these reasons the Milan Society for the Prevention of Tuberculosis in Children has established a sanatorium for children at Biassono, a little village near Milan. At first it was intended that the institution should receive only babies of tuberculous parents, but later it was decided to take in also larger children who showed signs of initial tuberculosis. The sanatorium is situated in a very healthy region and is splendidly adapted for heliotherapy. A Montessori school is connected with the institution.

The Window of the Bedroom (Het venster van de bedvertrek). Dr. G. C. van Walsem. Ziekenhuis, 1917, VIII, No. 3.

The windows in many hospitals, and especially in hospitals for mental diseases, are improperly constructed. The author proposes the following form: The window consists of two portions. The upper part takes in the upper third. It is hinged on its base and opens inward. The sides are closed by flexible thick cloth. This portion serves for ordinary ventilation. The lower part of the window takes in the lower two-thirds and consists of two vertical wings hinged on the sides and meeting in the middle. This part serves for a thorough and complete renewal of the air in the room whenever necessary. To modify the light, blue window shades are attached to each

portion of the window. In order to keep the shade of the upper portion in place when the window is opened, the shade runs on guide poles fastened on each side.

The Use of Saccharine in Hospital Pharmacies (Uso della saccarina nelle farmacie ospitaliere). Ospedale Maggiore, 1916, IV, No. 12.

As sugar is at present scarce and very expensive in Italy, the minister of finance, at the request of the hospital superintendents, has issued a circular in which he gives permission to hospital pharmacies to use saccharine instead of sugar in the preparation of all prescriptions as well as for sweetening simple syrups which the pharmacies prepare in large quantities for various uses. But, whether the hospital pharmacies obtain this saccharine from large pharmaceutical companies or import it directly from foreign countries, they are required to keep exact registers with regard to the amount of saccharine used in the various preparations.

Halazone for the Sterilization of Water.—In the *British Medical Journal* of May 26, 1917, p. 682, Dr. H. D. Dakin and Major E. K. Dunham (U. S. Army) described the preparation of parasulphondichloraminobenzoic acid and its value as a disinfectant for polluted water. This product was finally chosen because it can be used for the purpose indicated in a single tablet, the inconvenience of the double tablet method having already been amply demonstrated. The systematic chemical name being evidently too unhandy for ordinary use, these authors proposed the name "Halazone" for the substance and suggested that it should be put up in tablets, each containing 4 mg. This suggestion has now been carried out. The product is marketed in compressed tablets containing 4 mg. of the disinfectant, the quantity stated by Dakin and Dunham to be sufficient to sterilize a liter or quart of reasonably heavily contaminated water; in the case of extreme contamination a second tablet may be necessary. The tablets dissolve gradually in about five or ten minutes, and the water should be allowed to stand for about forty minutes before use. The tablets must be kept in amber bottles and not exposed to sunlight; under those conditions they are stable. They are supplied to the medical profession in bottles of 100 at 8 pence (16 cents) each in the United Kingdom. In the United States the same quantity costs 25 cents, but a vial containing 1,000 tablets costs only $1.

Chloramine-T Paste in the Treatment of Wounds.—The *Journal of Experimental Medicine* of July 1, 1917, contains three articles dealing with chloramine-T paste for the treatment of infected wounds and for the maintenance of asepsis of noninfected wounds. The best composition for the paste was ascertained to be: Neutral sodium stearate 86 gm.; chloramine-T, 10 gm.; distilled water, 1,000 c. c. The results may be summed up as follows:

Slightly infected wounds may be completely sterilized by the use of this paste in 35 percent of the cases and, in a much larger proportion, sufficiently so to permit of suture. It is useless to attempt to sterilize a profoundly infected wound by means of a paste. For this purpose an antiseptic solution frequently renewed must be employed. Chloramine-T paste, though relatively stable, cannot be depended upon to maintain its strength for more than one month. The use of the paste does not *per se* either retard or hasten the process of cicatrization.

BOOKS RECEIVED FOR REVIEW

The International Military Digest. Annual. A Review of the Current Literature of Military Science for 1916 Cumulated from the Monthly Issues of The International Military Digest. Pp. 630. Cloth. Cumulative Digest Corporation, New York City, 1917.

The Causes of Tuberculosis. Together With Some Account of the Prevalence and Distribution of the Disease. By Louis Cobbett, M. D., F. R. C. S., University Lecturer in Pathology, Cambridge. Pp. 707. Cloth, price $6.50. Cambridge University Press, 1917.

The Edith Cavell Nurse from Massachusetts. A Record of One Year's Personal Service With the British Expeditionary Force in France, Boulogne-The Somme, 1916-1917. With an Account of the Imprisonment, Trial and Death of Edith Cavell. Pp. 95. Boards, price $0.60. W. A. Butterfield, 59 Bromfield St., Boston.

Physical Exercises for Invalids and Convalescents. By Edward H. Ochsner, B. S., M. D., F. A. C. S., President Illinois State Charities Commission; Attending Surgeon Augustana Hospital, Chicago. Pp. 54. Flexible cloth, price $0.75. C. V. Mosby Company, St. Louis, 1917.

State Board Questions and Answers for Nurses. Being the Actual Questions Submitted at the Examinations of 31 State Examining Boards for Nurses, with Answers. By John Foote, M. D., Assistant Professor of Therapeutics, Georgetown University Medical School, and Pediatrist to Providence Hospital, Washington, D. C. Pp. 398. Cloth, price $2.50. J. B. Lippincott Company, Philadelphia, 1917.

Medical Diseases of the War. By Arthur F. Hurst, M. A., M. D. (Oxon.), F. R. C. P., Temporary Major R. A. M. C.; Physician and Neurologist to Guy's Hospital; Neurologist to the Royal Victoria Hospital, Netley; Lately Member of the Medical Advisory Committee, Mediterranean Expeditionary Force, and Consulting Physician to the Salonica Army. Second Impression. Pp. 151. Cloth, price $1.75. Edward Arnold, London, 1917.

Roentgen Technic (Diagnostic). By Norman C. Prince, M. D., Attending Roentgenologist to the Omaha Free Dental Dispensary for Children; Associate Roentgenologist to the Douglas County Hospital, Bishop Clarkson Memorial Hospital, Swedish Immanuel Hospital, St. Joseph's Hospital, and Ford Hospital, Omaha, Neb. Pp. 137. With 71 original illustrations. Cloth, price $2.00. C. V. Mosby Company, St. Louis, 1917.

The Treatment of Emergencies. By Hubley R. Owens, M. D., Surgeon to the Philadelphia General Hospital; Assistant Surgeon to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases; Chief Surgeon to the Philadelphia Police and Fire Bureaus; Assistant Surgeon Medical Reserve Corps, U. S. Navy. Pp. 350, with 249 illustrations. Cloth, $2.00 net. W. B. Saunders Co., Philadelphia and London, 1917.

Advice to Women on the Care of the Health Before, During, and After Confinement. With Hints on the Care of the New-Born Infant, and an Appendix on What to Get Ready for a Baby. By Florence Stacpoole, Diplomée of the London Obstetrical Society and Lecturer to the National Health Society, author of "Our Sick, and How to Take Care of Them," etc. Revised from the fifth London edition, to conform to American practice, by Lydia E. Anderson, R. N. Pp. 265. Cloth, price $1.25 net. Funk & Wagnalls Company, New York, 1917.

Essentials of Dietetics in Health and Disease. A Text-Book for Nurses and a Practical Dietary Guide for the Household. By Amy Elizabeth Pope, formerly instructor in the School of Nursing, Presbyterian Hospital; instructor in School of Nursing, St. Luke's Hospital, San Francisco, Cal.; author of "Quiz Book of Nursing," "Anatomy and Physiology for Nurses," "A Medical Dictionary for Nurses," and, with Anna Maxwell, of "Practical Nursing"; and Mary L. Carpenter, Director of Domestic Science of the Public Schools, Saratoga Springs, New York. Second edition, revised and enlarged. Pp. 379. Cloth, price $1.25. G. P. Putnam's Sons, New York, 1917.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Adjustable Crutch

The adjustable crutch shown will especially appeal to the superintendents of the public and charity hospitals where it is customary to supply the patients with the necessary crutches without charge. Instead of having to keep on hand a stock of crutches of from fifteen to twenty sizes, it will be necessary to carry only a few sizes for children and youths, and practically only a number of crutches of one size for adults, inasmuch as the adult-size crutch can be extended from 45 to 60 inches. The handle as well as the lower extension piece can be adjusted in a few minutes. The lower portion is grooved so that, when the three parts are bolted together, it makes a firm and reliable appliance. For use in army hospitals this crutch should also be of great service. The price of the device is very reasonable, and surely will result in a considerable saving in the course of time. The crutches may be procured at the surgical instrument supply houses.

Fig. 1. Showing [illegible] of adjustable crutch.

The Connell Gas-Oxygen-Ether Apparatus

Dr. Karl Connell, assistant surgeon to Roosevelt Hospital, New York, well known through his work of investigation in anesthetics, recently presented before the New York Society of Anesthetists an apparatus for the administration of nitrous oxid-oxygen-ether which has been built in accordance with his ideas. Through his extensive experience in the use of probably all apparatus, Dr. Connell has had unusual opportunity for studying the shortcomings of many devices.

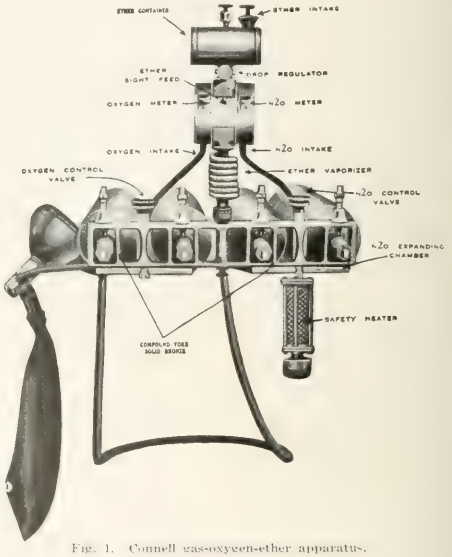

Fig. 1. Connell gas-oxygen-ether apparatus.

In designing his apparatus Dr. Connell has successfully overcome the one great drawback in the control of the gases, namely, that exact knowledge may be had of the amount of nitrous oxid or oxygen being delivered, and this without the necessity of making calculations, using liquids or oils in gravity manometers, or making allowances for any differences in tank pressures.

One of the first models which Dr. Connell devised and which was used for several years at Roosevelt Hospital, was provided with a piston traveling in a cylinder, this piston being actuated by pressure from the cylinder, and uncovering a calibrated slit for gas escapement. The disadvantage of this arrangement was that the piston would at times stick in the cylinder. Further experimentation led to the development of the use of an unbalanced vane or disc, on the periphery of which gas impinges, actuating the disc against the force of gravity. By riding the disc

on fine gold pinions in ruby jewel bearings, minute variations to a fraction of a teaspoonful of gas per minute are obtainable. A scale is attached to the disc and can be observed through a glass window of the housing, giving a direct reading of gas flow. The oxygen disc is calibrated to a flow, in steps of liter per minute, from 0.2 to 2.5 liters per minute. The nitrous oxid disc is calibrated in steps of 1 liter per minute from 2 up to 12 liters per minute.

These meters are about the size of a large watch.

While the meters and control are of first importance, other parts have been worked out with equal care.

Contrary to most methods of cylinder mounting, the cylinders are placed on their sides, two of oxygen and

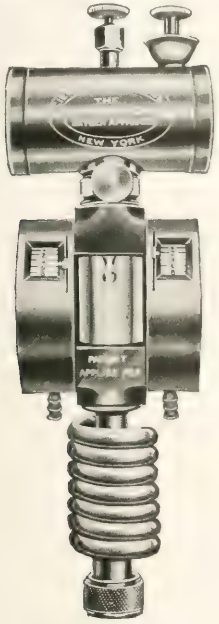

Fig. 2. Connell ether container, meters, and vaporizing tube.

two of nitrous oxid. They are connected by means of a one-piece bronze yoke. The control valves are seated in the yoke and can be manipulated with but little effort.

An alcohol lamp, which has safety features eliminating any possibility of ignition of ether vapor or liquid, is attached to the nitrous oxid side. Mounted above the meters is a container for holding ether. A sight-feed drop valve allows the ether to drip into a vaporizing coil shown in the illustration, whence it is sent into the yoke and on to the patient. The weight of the apparatus is but 7 pounds, exclusive of cylinders.

No special table or stand is required, but any convenient support, such as a chair, dressing table, or stool may be used, as found best suited to the case in hand.

Motor-Driven Plaster-of-Paris Saw

The removal of plaster-of-paris casts has always been one of the operations which the chief gladly turned over to be performed by his assistant, we therefore believe that the chief, the assistant, and even the hospital orderly will hail with delight the advent of the electrically-driven plaster-of-paris cutter. Such an apparatus is now offered to the surgical profession under the name of the electro-surgical cutter. The apparatus consists of an electric motor, the shaft of which extends at one end and has

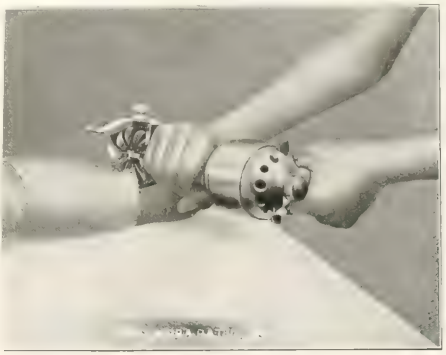

Fig. 1. Electrically driven plaster-of-paris saw in operation.

coupled to it a stem to which a rotary cutting knife is attached. The knife has concave cutting edges so arranged that it will cut clear, thus automatically making clogging or stopping of the motor impossible. A guard over the knife protects the operator from injury as well as dust and flying particles while the apparatus is in oper-

Fig. 2. Showing plaster-of-paris cast cut by means of electrically driven apparatus.

ation. A handle extending at right angle from the motor permits of a firm grasp, carrying near one end a push-button by which the motor may be started and stopped instantaneously.

The motor-driven apparatus eliminates the irregular jerks of movement so common when hand-operated devices are used, and the toughest plaster-of-paris dressing can be removed with surprising rapidity and without the least discomfort to the patient.

Miss Edith Mutch and Miss I. J. Masters have lately taken the positions of directress of nurses and night supervisor, respectively, at the Brownsville General Hospital, Brownsville, Pa.

LETTERS TO THE EDITOR

Colored Pupil Nurses

To the Editor of THE MODERN HOSPITAL:

I notice your article (July, 1917, p. 72) relative to colored pupil nurses. Though we are not in a middle state, we would like it known that we are maintaining a nurse training school and would be glad of more desirable applicants for our work, beginning September 1.

F. BELLE RICHARDSON,
Superintendent Hale Infirmary and Nurse Training School, Montgomery, Ala.

Another Problem in Economy

To the Editor of THE MODERN HOSPITAL:

Although it is known to everybody that hospital costs have gone up almost to prohibitive points, some of the members of our hospital communities are demanding that we take care of all free cases that come, without reference to the proportion of free cases to paying patients. The argument is that "the people are sick and must be taken care of." What are we to do about it?

A SOUTHERN HOSPITAL.

The settlement of this problem will require probably more courage on the part of the superintendent than almost any other problem in the hospital management because, in the reasoning of your hospital public, you are "turning a deaf ear to the call of distress"—and that is a hard thing to do. As a matter of fact, your hospital public are not paying you for your philanthropies or for charities; they are paying you to run their institution in a businesslike way. They have a right to expect that you will administer your trust along sane business principles, and it is not according to business principles to engage to do a thing or to attempt to do a thing for which you have no funds. The thing for you to do is to be quite sure to reserve enough beds, in rooms and wards in your hospital, allowing for, say, 25 percent of unoccupied time, to meet your expenses in full, and then, if there are beds over and above that number, and if there are funds to support those beds, it is all right for you to take in free patients. Otherwise, it is your duty to demand of your public and your board the necessary funds to do your work with.

You will have to handle this matter in an adroit, tactful but very courageous way or you will have a lot of trouble.

A Plea for Married Institutional Physicians

To the Editor of THE MODERN HOSPITAL:

Owing to the present unsettled conditions due to the war, and the apparent scarcity of physicians for institutional positions, I believe this a timely topic for consideration. Many of the younger doctors are offering their services to their country, and a much larger number will be required to meet the needs of modern warfare should our country unhappily have to bear the brunt of the fighting, as the present conditions would seem to indicate. A large proportion of these medical men will be taken from institutions, because statistics prove that candidates having had institutional experience seem to be preferred for government services. How are these hundreds of vacancies going to be efficiently filled?

From a compilation of institutional records it is surprising to note the great preponderance of single physicians occupying institutional positions. From personal experience, and from the observation of others, it is also appalling what a scarcity of institutional openings there are suitable for married physicians. What is the reason for this state of affairs; and is it justified from the point of view of true economy and efficiency?

About 90 percent of the physicians of the United States get married within five years after their graduation, which means that the average doctor will occupy the average institutional position, outside of his intern year, four years. After that he will seek something that will allow him to enjoy a normal married life as do other human beings. During his institutional career he may have become especially proficient in some particular line of work characteristic of that institution. If he is a capable man he will have become as efficient and useful as at least two green men, and his employers will by this time have measured his future capabilities, his honesty, and his reliability—all of which are of very great importance in institutional work of a responsible nature. Is this worth anything to the superintendent of a hospital or sanatorium?

In the legal profession, especially corporation law, it has been found that the longer a lawyer is connected with a concern the more familiar he becomes with the corporation's needs and policies and the more valuable do his services become. In most industrial pursuits long-time service is encouraged, because it promotes true economy and efficiency.

A doctor and a machinist, after all, have only a broad knowledge each of his profession and trade, respectively. But the doctor with large experience in, let us say, laboratory and pathological work, is certainly of far greater value to the laboratory of a large general hospital or insane institution than is his brother who has just completed a service on the wards of a surgical hospital. So, too, the machinist; he is of far greater value to the maker of gasoline engines if he has had special experience along that line than he would be to the maker of looms.

To put the proposition another way: as superintendent of an institution is it of any value to you to know positively that your subordinate is to be relied upon during your absence, that he is competent and reliable to bear a large share of your burdens should misfortune unhappily befall you? All these points have been very carefully considered by modern business institutions. If a permanent employee is of greater value to them than is the continuously shifting help, why is it not equally valuable—even more so—to an institution which is, strictly speaking, nothing more or less than an unproductive business concern, usually handicapped by a limited capital? Do you know, outside of the medical profession, of any other industrial or professional institutions that depend upon trained help which close their doors to a valuable man because he is married? Of late many hospitals for the insane have found it far more profitable to engage married than single attendants. Are doctors any less important, are the quarters provided them, as a rule, any more comfortable than those provided for attendants and their wives?

Some of the reasons given by institutional men for preferring single men are the following:

First, lack of room is alleged. This objection may be based on good grounds in some instances, but in many others it is entirely unfounded. The experience of going through the various stages of orderly, nurse, clerk, intern, and assistant to the superintendent, in sixteen different institutions, together with a careful study of many in which I was not employed, gave me very excellent reason to make the statement that in only one of these institutions was every room economically utilized, thus making room for a married physician absolutely impossible. In a great many institutions I found rooms most uneconomically utilized, and yet when the question of a married physician came up the superintendents almost invariably gave the excuse that there was no room.

Another objection to married physicians is often founded on the close social relations of the doctor to patients and nurses. These objections, although oftentimes well founded, are really no more pertinent in institutional work than in private practice. As a matter of fact, the compatibility or incompatibility of a physician's wife to institutional life is purely an individual problem. Each case should be judged on its own merits. I venture to say, however, that the experience of many who are employing married physicians bears me out that the objections thereto are greatly exaggerated and the benefits therefrom are apt to be overlooked.

To the married physician with a leaning towards institutional work, the present situation is very depressing. Take my own case as an illustration; from mere boyhood on I did institutional work in various capacities; I was given courteous treatment and encouragement to work my way through college and medical school. Upon leaving an institution the superintendent many times expressed regret at losing an efficient and reliable employee; many expressed hopes that I would return when in need of a position. After I graduated, alas, I committed the sin of getting married. That temporarily ended my institutional career. I found that those who had employed me previously now could not possibly find room for me. In my hunt for suitable institutional work I found that nine out of every ten positions were closed to married men. Today, although I have a broader training, am more efficient, and would be of far greater value to any institution than I was then, I am obliged to live apart from my family and lead an irregular life in order to work at that branch of my profession for which I am best fitted by experience and training. Is any thinking physician that cares for his family going to lead such a life permanently, or is he going to await the opportunity for something to show up that will enable him to make a living without disrupting his family? Is the institution employing me going to profit by losing an experienced man and hiring in his place one that is, ten chances to one, not familiar with the details of the work; who may turn out unreliable, dishonest, intemperate or otherwise unfit for institutional work; or, if found qualified, will only fill the position during a maximum period of four years, if he is one of the ninety out of the hundred average physicians, before he, too, commits the sin of getting married?

Think this over, you institutional managers, superintendents, and trustees, and you will find that in the long run a married physician will be a better asset to your institution than two single ones.

CARL SCHEFFEL, PH. B., M. D.,
Coolidge Corner, Mass.

A new home for the Chicago Lying-In Hospital, to be known as the James Hobart Moore Memorial, was opened July 28. The building, which is a seven-story fireproof structure, was made possible largely through a gift of $100,000 from Mrs. James Hobart Moore. Construction work was started three years ago, but because of the war and the ensuing financial uncertainty completion was delayed. Accommodations have been provided for 120 mothers and as many babies. The equipment of the new hospital is said to include the latest improvements in everything that science offers for the operation of such institutions.

Drs. Pearse and Cooley opened new quarters for their private hospital at Brigham City, Utah, in August.

HINTS FOR HOSPITAL SUPERINTENDENTS

The Benevolent Autocrat

"My board does not ask for my opinion," is the remark that we often hear superintendents make. Somehow the remark fails to find a response in the minds of most of us; there is generally a reason why a board of trustees does not ask for the opinion of its superintendent. Hospital trustees, medical staff members, and the responsible supporters of a hospital are usually not well versed in administrative matters. All these people are seriously interested in the affairs of the institution with which they are associated and nearly always seek really serviceable information, the exceptional case being where someone has some personal "ax to grind." If a superintendent stands up sturdily to meet his or her problems with wisdom and judgment and tact, and if he or she finds a smooth way over the rough places, it will not take a board of trustees or the members of a medical staff very long to find out that that superintendent knows what he or she is talking about and doing, and very soon all apparently insoluble problems of the trustees and the medical men will be brought to him or her for solution.

If a board of trustees or a medical staff is running a hospital, giving the superintendent orders, without much regard to what he or she may think about the wisdom of those orders, it can be pretty confidently assumed that it is the superintendent's fault and not that of the trustees or medical men.

Hospital Architecture and the New Trustee

Most of the monstrosities in the shape of so-called modern hospitals are to be credited to enthusiastic new trustees of hospitals. When a trustee is first elected to a hospital board his enthusiasm known no bounds, and it generally takes him about thirty days to become an expert hospital man. The first thing he wants to do is to make some plans, and the shorter the time that he has served as a trustee, generally, the less likely is he to be willing to take advice from the superintendent of the hospital or from anybody else. If a trustee at this stage of his career is not headed off he is likely to perpetrate one of the architectural monstrosities that we see scattered all over the country. His course generally is to bully the architect, and, having done this, the rest of his crime is easy.

If trustees of hospitals used the same good, hard, common sense that has served them to build up successful private business and has made them prominent in their communities, we would have better hospitals in this country; but to a great many men, and women, too, the hospital is a hobby horse, and once seated in the saddle they become princes of joyriders.

Gasoline for Cleansing Wounds

In cases of injuries due to railroad or shop accidents the wound areas are usually soiled with a great deal of grease and dirt, which must be removed from the area of the wound before iodin can be applied and the wound dressed. A gasoline-soaked sponge does the work quickly without the irritation to the parts that scrubbing with green soap and a brush produces. Gasoline is a thorough disinfectant and much cheaper than many others.

It is a good practice to keep a bottle of gasoline handy in the dressing room. It takes up little space and is always ready.

I. MORTON, R. N.,
Colorado Springs, Colo.

DANGER IN DRAFTING MEDICAL STUDENTS AND INTERNS

Resolutions of the New York Mayor's Committee on Hospital and Medical Facilities

At a meeting of the Mayor's Committee on Hospital and Medical Facilities, held at City Hall, New York City, on August 15, 1917, the following resolutions were unanimously adopted:

Resolved, That the Mayor's Committee on Hospital and Medical Facilities call the attention of the Secretary of War to the serious consequences to the civilian population of the country and to the maintenance and operation of the hospitals, of the inclusion of medical students and hospital interns under the act for selective service.

Further Resolved, That the chairman be directed to lay the views of this committee before the proper officials of the government and the district boards of the state of New York, and to take the necessary steps to bring about the temporary exemption of these students and interns in order to secure a constant supply of medical men to the army throughout the war and to prevent the embarrassment of hospitals and the consequent serious results to the population of the United States.

The following named hospitals were represented at the meeting: New York Hospital, Presbyterian Hospital, Manhattan Eye, Ear, and Throat Hospital, Lebanon Hospital, Mt. Sinai Hospital, Brooklyn Jewish Hospital, Long Island College Hospital, Brooklyn Hospital, Italian Hospital, French Hospital, Columbia University, Roosevelt Hospital, St. Luke's Hospital, Post-Graduate Hospital, Swedish Hospital, St. Francis Hospital, Lincoln Hospital, German Hospital of Brooklyn, Columbus Hospital, Staten Island Hospital, Polyclinic Hospital, New York Orthopedic Hospital, Hospital for Deformities and Joint Diseases, Metropolitan Hospital, Kings County Hospital, Bellevue Hospital, City Hospital, Willard Parker Hospital, Kingston Avenue Hospital, Riverside Hospital, Montefiore Home, United States Naval Hospital.

THE "INSTITUTIONALIZED" INSANE

With Incentives to Normal Life Lacking, Few Could Remain Sane—Necessity of Preserving Normal Stimuli in Institutions for the Mentally Deranged

"That inhuman thing that is connoted by the term 'institutionalism,'" says Dr. Mary Lawson Neff in an article published in the *Journal of the American Medical Association,* "has brought about conditions under which none of us could remain normal." She describes the following incident, from which her own personal interest in efforts to "normalize" the life of the insane dated.

"Passing through a ward where flowers, sunlight, air and pleasant furnishings gave a superficial appearance of comfort, my attention was called to the patients. These were sitting on either side of the corridor in straight rows, interrupted here and there by a potted plant, or by a 'sacred' sofa pillow on which human head had never lain. This row, the chairs all alike, and the faces all turned the same way, left nothing to be desired from the standpoint of geometry. With hands folded, often with eyes closed, not one of these people showed any gleam of interest in life. I stopped to speak to a sweet little white-haired woman, saying, 'Why don't you people find something to do? Can't you play games, or read aloud, or something? You can at least break up this row, and turn around and talk to each other!' The reply, given in a perfectly colorless voice, was, 'We are not allowed to turn around. The matron thinks we look neater sitting this way.' Then and there I determined to study my problem from the patient's point of view; and as I studied it thus, there grew a deep conviction that the cruelest thing that comes to these thousands of fellow-beings whose lives are spent shut away from the world is ennui—the unspeakable ennui of hours and days and months and years, colorless beyond anything we can imagine."

Normal life, Dr. Neff continues, is largely a series of responses to the three stimuli furnished by necessity, ambition, and the family affections. The institutional patient is suddenly and effectively cut off from all three of the motives that actually make life, and in this abnormal environment we quite naturally find that after a time we have a mental condition that is a blend of the original psychosis and the "psychosis of abnormal living."

There are four main reactions to prolonged ennui: apathy, violence, untidiness, and the elaboration of delusions, fears and obsessions, until the normal possibilities of the patient are lost in perverted mental activities that obliterate everything else.

The problem, then, in hospitals for the insane, is to find normal stimuli, incentives, rewards, and human reactions for people whose horizon is contracted. The "normal areas" of the patient's mental life are the ones on which to base his treatment, rather than the abnormal ones.

Since the major stimuli of life are lacking, the minor ones must be utilized to the fullest possible extent. Every method of stimulating ingenuity, inventive ability, esthetic work, or self-expression of any kind, should be employed. The play-motive may be used advantageously to a large extent; through it the patient with the mental status of a child may best be led to more serious forms of employment.

Altruism can be developed to a degree surprising to anyone who has not actually attempted the work. A group of discontented patients was once transformed by "adopting" an orphan asylum for whom hundreds of little garments were made. In another hospital a society of patients calling themselves "The Helping Hand" spends certain afternoons working for the less fortunate wards.

The activities furnished for patients should be as normal as possible in every way, including carefully adapted methods of teaching, a variety of work, liberal provision for recreation, respect for the "personal equation," reward for the work performed, and a "therapeutic disposition of the product."

The assumption that the unfortunate patient with mental symptoms has "forfeited his industrial status" seems hardly tenable. The late Prof. C. R. Henderson, of the Department of Economics in the University of Chicago, admirably expressed the proper point of view by saying, "What should be the patient's occupation, and what should be the disposition of his earnings, should be determined by medical authority, with sole reference to its effect on his health." The economic gain in transforming the violent patients into tractable ones, the untidy into neat ones, the destructive into productive ones, and the unhappy into happy ones, which follows a well-planned occupation movement, is very great, even where patients are given, as is done in some institutions, all the proceeds from such work as can be sold. This fact is of importance in seeking legislation which will make further advance in this field possible.

The beginnings already made are fruitful and encouraging, and it is hoped that soon the institution for the insane shall be a protected community of people living as normally as possible.

THE MODERN HOSPITAL

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FEDERAL INSPECTION AND CONTROL OF AMERICAN HOSPITALS*

Greater Efficiency the Demand of the War Epoch—Need for Compulsory Treatment of Syphilis and Infectious Diseases—Task of the American Hospital Association

By ROBERT J. WILSON, M. D., President of the American Hospital Association, New York

THE year that has passed since our last annual meeting is probably destined to be described as the beginning of the greatest epoch in the history of civilization. The foremost countries of the world are now waging a world war for equal rights for all the people. In order to prosecute this war effectively and vigorously, the various governments are attempting to conserve to the last degree every resource at their command, human and material, and to do this there is a general reorganization process going on that involves governments, states, communities, and even our very homes.

Business methods that stimulate production, that do away with waste, that prevent hoarding, that eliminate duplication, that bring the producer and consumer closer together, to their mutual advantage, are being created and adopted, and the improvements in government and the world of business made necessary by the exigencies of war will be to the lasting benefit of all the people.

Laggards in any walk of life cannot survive this reconstructive period, no matter whether they be individuals or societies. All must take stock of their methods and resources, and, if found to fall short of the standards established by the march of the times, must make such changes for the betterment of their condition as will insure their sure footing in the civilization of today.

This country has many national civic organizations whose whole aim is to benefit all the people; our own association is one of these and by its constitution and laws has assumed the responsibility of setting the high mark for efficiency and economy in everything that pertains to hospitals.

How well we have fulfilled our trust can best be judged by the service that the hospitals represented by our membership are giving the communities that support them. But service alone will not suffice to fill the public need; it must be the best service, and it should be a government-inspected, government-controlled, and frequently government-supported service. It seems to me that this association should use its best efforts to bring about a system or systems of federal, state, or municipal inspections that would insure to the public the minimum requirements necessary for the proper care and statistical records of the sick. The census bureau of the Department of Commerce attempts to record the statistical reports of the hospitals of this country. There is no law that I know of that compels hospitals to file such information, and the result is that the statistical records of the hospitals of this country on file in government records are of such a character as should make every one of us blush for their brevity and incompleteness. How can we improve this condition is the natural question. The answer should be easy. By demanding recognition for our proper place in the social economy of the country, by establishing minimum requirements for membership, which should be of such a standard as to insure at the very least good hospital care in a place properly administered and equipped.

I believe that the papers and reports to be presented at this conference and their discussion will help us in solving our various difficulties and give us enthusiasm to continue our work, which is the general purpose of our meeting.

*President's address, read before the American Hospital Association at its nineteenth annual session, Cleveland, September 11-14, 1917.

There are certain policies of administration, both of this association and of its units, that deserve your careful consideration. Hospitals, being public servants and taking into their wards the most helpless class of citizens, the sick and wounded, are under greatest obligation to the people for their existence, and, for their own protection and that of those they serve, should be under proper license and inspection, preferably governmental, but if not that, then through the restrictions of membership in this association. Every member of this association should resolve to furnish the United States Census Bureau with full and complete statistical information relative to the institution he represents, duplicate copies of which should be sent to the secretary.

This association should place itself on record as favoring laws for the compulsory treatment and control of infectious diseases, especially tuberculosis and syphilis, which by their insidious character do more harm than any of the others, and whose very insidiousness is often reflected in their mode of control by the authorities to whom they are entrusted. An effort should be made to have the diagnostic clinic of the hospital universally adopted. The admitting physician and his staff are naturally the most important officers in the hospital. The hospital patient should enter the ward and operating room with all the medical information obtainable, by recourse to every modern method of diagnosis, for the benefit of attending or operating physician.

At this time when each American is putting his shoulder to the wheel of national progress, when every heart longing for peace is willing to give up everything, even life itself, if peace can be honorably brought about and of lasting endurance, when every agency in our great country is readjusting itself to our national need, the American Hospital Association must by every means in its power help the government. We represent the hospitals of this country, and when they are called upon finally for that succor they must always give, let there be no chance to say they were called and found wanting, but rather that their zeal for service was well justified in their preparation for it.

HOSPITALS AND WORKMEN'S COMPENSATION*

Operation of Compensation Laws to Decrease Industrial Accidents and to Improve Traumatic Surgery—Problems Created for Hospitals—Fee Bills—Division of Fees Between Hospitals and Doctors

By THOMAS HOWELL, M. D., Superintendent, and KATHARINE BUCKLEY, Compensation Clerk, New York Hospital, New York

SINCE 1911 thirty-seven states and four territories have enacted workmen's compensation laws. There is probably no law which is today of more general interest and importance to hospitals.

New York, in 1910, was the first of our states to enact such a law, but in 1911 it was declared unconstitutional. Wisconsin and New Jersey placed workmen's compensation acts on their statute books in 1911, and these were upheld by the courts.

There is apparently no question as to the permanency of the workmen's compensation system in this country. A decision of the United States Supreme Court has upheld the rights of the states to enact such legislation. The three leading types of workmen's compensation insurance have been declared legal by this tribunal. These three types are exemplified by the Iowa law, under the provisions of which both employer and employee are at liberty to work under the statute or under common-law principles; the New York law, which is compulsory; and the Washington law, which is not only compulsory, but much broader in its provisions, including domestic and farm laborers, and requiring all employers to insure in the state fund, thus excluding private insurance companies.

The theory upon which these laws are based is this: A loss to the worker which is connected with and arising out of his employment shall, so far as possible, be charged to that industry in which he is employed as one of the costs of production and so distributed through the community. In other words, the cost of caring for accident cases is charged into the cost of production just as are capital, plant, labor, materials, fire insurance, and general overhead expenses, and thus become a proper and consistent charge upon society in general.

To illustrate how the law operates: The New York Hospital is located in a district in which there are numerous clothing factories. Previous to the adoption of the compensation law, when one of the employees of these factories was injured, he came to the hospital and was treated. The hospital was not paid for the service rendered, the factory lost the services of its employee for a

*Read before the American Hospital Association at the nineteenth annual session, Cleveland, September 11-14, 1917.

longer or shorter period, and its owners were in constant fear of damage suits, but the brunt of the burden fell upon the one least able to bear it—the injured man.

Now this is all changed. The hospital is paid for its work, the employer is covered by insurance and has no fear of damage suits, the injured employee demands and receives, as his right, proper surgical and other attention, and, if he is incapacitated beyond two weeks, gets two thirds of his regular wages. The burden has been shifted to you who wear the clothing, as the manufacturer in determining his costs and selling prices now includes his workmen's compensation premium with his other items of expense. When distributed in this way the cost of accidental injuries is scarcely felt by anyone, whereas under the old law great hardship was unjustly inflicted upon unfortunate working people.

Under the old common law system, when an employee was injured in the course of his employment, his only recourse was to bring suit against his employer for damages on the ground that the accident was due to the employer's negligence. The results of this system were extremely unsatisfactory, and there gradually grew up a realization that these old employers' liability laws were a prolific source of disagreement, dissatisfaction, and hostility between employer and employee.

The employee was ordinarily in no position financially, particularly in view of his accident, to bring suit. Furthermore, a workman dislikes to go to law with his employer unless he is prepared to seek employment elsewhere. Accordingly, he either compromised at an inadequate figure or was induced to bring suit by unscrupulous lawyers (ambulance chasers), who retained for their services a large share of the award. These old liability laws were entirely satisfactory to lawyers, but distinctly unsatisfactory to employers, employees, hospitals, and physicians.

When the employer carried liability insurance under the old system, the insurance companies were loath to allow the case to get into court, and sought by every means, fair and unfair, to secure a settlement before court proceedings were begun. This led to many abuses, and there was much dissatisfaction on the part of employees, who generally believed that they were cheated out of about 90 percent of what was due them.

Workmen's compensation, as applied to the workman and his dependents, is an attempt to substitute justice for charity, and it gives him a certain feeling of security and freedom from worry. As applied to the employer, it relieves him of the uncertainty of a court decision, and enables him to figure almost exactly what it will cost him to provide for his injured employees, and to pass this cost on to the ultimate consumer. As applied to the hospital, it means increased income and consequently greater opportunity.

It is becoming apparent that compensation laws will operate to decrease industrial accidents. While the acts do not emphasize it, the element of conservation is one of the most important results of the system. Employers generally are installing the most modern and accident-proof machinery obtainable, for they now recognize the importance of preventing the occurrence of industrial accidents. When employers are remiss in this respect, their insurance carriers will apply corrective measures, such as a low schedule rating with a consequent high premium.

Employers and insurance carriers cannot now afford to give inadequate care to injured employees. They know that neglect or unskillful treatment may result in the injured employee becoming a permanent pensioner. Under the old law, the employer and the insurance company feared the unscrupulous lawyer; under the new law, they fear the dishonest or incompetent doctor.

It is to be expected that employers with their first-aid rooms and hospitals and insurance carriers with their staffs of paid physicians will take a considerable amount of work away from the regular hospitals, but the hospitals will still have plenty to do. It is conservatively estimated that the number of industrial accidents resulting in death in this country is about 35,000 annually, and the number of non-fatal injuries exceeds 500,000. Most persons suffering from minor injuries rush to the nearest hospital, and those who are severely injured are brought in in our ambulances.

Traumatic surgery is coming to be regarded as a most important branch of medicine, largely owing to the war, but partly owing to workmen's compensation laws. At the present time the most competent surgeons in the world are devoting their attention to it on the battlefields of Europe. From them we are hearing much about the preventing or aborting of infection by means of chemical sterilization. Those who have studied this treatment believe that it has possibilities as a limb-saver and a time-saver. The new paraffin treatment of burns is also favorably commented on. If these innovations accomplish nothing else, they will at least prove an important factor in directing attention to the need for better treatment of industrial injuries.

Industrial surgery in the past has not always received from hospitals and doctors the consideration to which it is entitled. Much of this work has been poor and the results have been bad. We hospital people know that this important work has

been often entrusted to the least experienced interns. Continuous progress in this line of surgery may now be confidently predicted.

While we admit that hospitals are going to have aggressive competition in this field, which, after all, is an excellent thing, yet we believe that the future advancement and progress in industrial surgery, now that its importance is becoming recognized, will come largely through their efforts.

When the workmen's compensation law went into effect in New York, one of the first difficulties we encountered was in the establishment of equitable ward rates and in securing an acceptable schedule of professional fees. The act does not limit the amount which shall be paid for treatment during the statutory period of sixty days, but the insurance companies were naturally anxious to keep down medical fees and hospital expenses. Finally, at a meeting attended by representatives of the workmen's compensation commission, the hospitals, and the insurance carriers, it was agreed that a ward rate of $2.25 per day was reasonable, and it was further agreed that for ambulant cases $2 should be charged for first treatments and $1 for subsequent treatments.

A medical and surgical fee bill which had been approved by a committee of the Medical Society of the State of New York and by the New York Claim Association was tentatively accepted by the hospital representatives. The New York Hospital still bases its charge on this schedule, and we presume that most of the other hospitals do likewise, but we understand that the state medical society disowns it and refuses to recognize it officially. Under this schedule the largest fee allowed the surgeon is $75, which includes first aid, operation, and full subsequent treatment. This is a small fee, but, when it is recalled that formerly the surgeon usually received nothing for treating these patients, it is not so bad.

Our next difficulty arose when we came to discuss the division of fees between the hospitals and the doctors. No plan acceptable to all concerned was devised by the committee, and now after three years have elapsed there is no uniformity among hospitals in this respect.

In some instances the hospital retains all fees, the doctors evidently conceding that the hospital's needs are greater than theirs. This plan is not approved by the insurance companies. They prefer to have the professional fees go to the doctors, as they believe the doctors will take more interest in these industrial accident cases if they receive some compensation for their services.

Other hospitals, particularly those situated in residential districts where there are few accident cases, refer all ambulant compensation cases to the offices of their visiting staffs. The insurance companies object to this plan. Their claim is that the patient rarely goes to the doctor to whom he is sent, but to one of his own selection, who may be dishonest or incompetent.

Some hospitals retain the $2 fee for the first treatment and turn over the fees for subsequent treatments to the doctors who actually do the work. Others retain a certain percentage of the fees—10 or 15 percent—to cover the cost of dressings, the remainder being paid to the doctors.

At the New York Hospital the question of division of fees was happily settled when it was decided to pay small salaries to all out-patient physicians, a policy which had long been under advisement. These out-patient men take care of practically all the subsequent treatments, and also all new patients applying between 10 and 12 o'clock in the morning. The admitting physicians, who are salaried men, are responsible for first-aid treatments at all other hours, but the interns do much of the actual work.

Our hospital retains all workmen's compensation fees, except in the case of ward patients; in these cases the professional fee is turned over to the attending surgeon. In addition to the charge of $2.25 per day, the hospital collects and retains fees for x-ray work and for the use of the operating room. Crutches and other appliances and special nursing are also charged to the employer.

The New York Hospital and the House of Relief are located in districts where industrial activity is great, and it early became apparent that to handle efficiently the additional clerical work occasioned through the operation of the workmen's compensation law, it would be necessary to increase our clerical force. Accordingly, two clerks were assigned to this work exclusively. They are practically in complete charge of it, and it is regarded as a regular department of the hospital. If this work had been left to the regular clerical staff it would have been neglected and the hospital would have lost heavily.

The compensation clerks are much appreciated by the commission and the insurance carriers, as they know they can always depend upon these clerks for prompt and authentic information regarding their cases. Incidentally, the clerks relieve the superintendent and the doctors of a lot of troublesome details.

Some hospitals report that they have trouble in getting their physicians to fill out and sign certificates required by the commission and some of the insurance companies. At the New York Hospital these forms are filled out by the compensation clerks and signed by the superintendent. This we find to be much more satisfactory administra-

tively, and so far no exception has been taken to our method.

When a patient comes to the emergency room for first treatment, the nurse on duty enters his name, address, occupation, name and address of employer, together with the diagnosis and date of treatment, in a book kept for this purpose. The patient is given for his keeping a card which identifies him as a compensation case. He is also given instructions about reporting for subsequent treatments.

We treat subsequent cases in the out-patient department, not because we regard them as charity patients, but because it is the only available place we have.

When the patient applies at the out-patient department for his first subsequent treatment, he is referred to the desk of the compensation clerk, who has on file a card bearing the information obtained by the nurse on the patient's first visit to the hospital.

The clerk has already notified the employer by means of a form letter that the patient has applied for treatment. In this letter we endeavor to impress upon the employer the necessity of promptly reporting the accident, and suggest that he furnish the hospital with the name of his insurance carrier, thus enabling us to take the matter up direct with the carrier without further annoyance to him. Information is also given as to our charges. Replies are received to about 80 percent of our letters, and 10 percent are returned by the post-office department as undeliverable on account of defective addresses. As the New York law requires that treatments by hospitals or doctors shall be authorized by the employer, these letters are of importance in a legal way. If the hospital can show that the employer acknowledged receipt of the letter and gave instructions regarding billing, a legal claim for services can easily be established before the commission.

The compensation clerks keep informed regarding the condition of every patient, and if one does not report for treatment regularly his employer is notified. Employers appreciate this attention.

Efforts are made to prevent patients from returning oftener than their condition demands. Insurance companies appreciate this attention. We rarely find it necessary to treat ambulant cases oftener than three times a week.

First treatments are, of course, given at any time, but subsequent treatments are given during only one hour each day.

When treatment is completed, an itemized bill is sent at once, either to the employer or directly to the insurance carrier. A large percentage of the bills are paid promptly, but there are many which have to be followed up four or five times before a remittance is received. An efficient follow-up system is essential. Probably a personal visit to the employer would hasten payments. We do not allow our attending surgeons to send out separate bills, as this would result in complications and delayed payments.

For a year after the law went into effect, a great amount of difficulty was experienced in obtaining payments. This was due largely to the fact that many employers were not aware that the law existed, or hoped to evade it, and failed to take out insurance; or, if they had insurance, they neglected to report their accidents. They have now learned the importance of carrying insurance and of reporting their accidents.

The New York act stipulates that the employer must provide such medical and surgical aid, nurse and hospital service, medicine, etc., as may be required during the first sixty days after the injury. When a patient's treatment originates in our hospitals, we, of course, care for him as long as his condition requires it, regardless of the statutory limit. Frequently cases are referred to us for treatment after the sixty-day limit has expired. In these instances we feel justified in insisting upon a definite understanding regarding payment for our services. As a practical business proposition, the insurance companies frequently pay for medical treatment and hospital care beyond the statutory limit, as by so doing they shorten the period of disability, and thus reduce the payment of compensation.

While it sometimes happens now that patients are taken away from the hospitals by doctors employed by the insurance companies, still the hospitals of New York are gradually increasing their compensation work. At the New York Hospital this work is confined largely to the care of ambulatory cases, from 75 to 100 being treated daily. Formerly at least 95 percent of these cases were treated free.

The New York act contains a clause exempting from its provisions persons not employed for the pecuniary gain of their employers. As hospitals are not conducted for the pecuniary gain of their managers, it would appear that their employees did not come under the provisions of the act. But as certain occupations, such as engineers, electricians, mechanics, painters, laundrymen, and laundresses, are specifically mentioned as coming under its provisions, the hospitals were in somewhat of a dilemma. They did not know whether to insure under the law or not. As a matter of fact, very few did insure under it, preferring to retain their old liability policies. But the last leg-

islature came to their assistance with an amendment to the law enabling the employer and employee by joint election to come under the law if they so desire.

The New York Hospital then decided to take out this form of insurance. Under the policy issued the insurance company agrees, among other things, to inspect the hospitals from time to time and to suggest such changes and improvements as may operate to reduce the number of personal injuries. Inspections by competent inspectors and safety engineers such as the insurance companies employ are of considerable value. In our case they made several excellent recommendations, especially in connection with the laundry machinery.

One of the largest corporations in this country which had been carrying its own compensation insurance recently took out a policy with an insurance company largely because it wanted to have its plants periodically inspected by competent inspectors not on its own pay roll.

Workmen's compensation insurance apparently gives greater protection to employers than does ordinary liability insurance, and is more satisfactory to the employees. It simplifies hospital insurance and fixes responsibility.

The premium cost is based upon the entire remuneration during the term of the policy of all employees, except that no premium charge is made for any portion of the salary of any officer in excess of $1,500 per annum. The premium charges on a hospital pay roll are as follows:

$0.08 per $100.00 on the clerical pay roll,
0.232 on the professional,
1.32 on the laundry,
1.95 on chauffeurs and helpers, and
0.568 on the pay roll of all other employees.

It is necessary that the pay roll shall be kept to show the different classes in order that at the end of the year an audit by the insurance company may be made to determine the actual premium. If the original premium was excessive a return will be made by the company, but if it was not sufficient the hospitals will be required to make up the difference.

There is a provision of this insurance policy of peculiar interest to hospitals. It specifies that any employer may assume the responsibility of medical attendance for the statutory period of sixty days, for which there is a reduction in premium of 17.5 percent. Most hospitals will probably elect to assume the responsibility for medical attendance. The New York Hospital reduced its premium $400 by doing so.

In this paper we have dwelt largely on the New York act for the reason that it is the only one with which we have had practical experience. The New York act is not ideal, but apparently it is fairer to hospitals and physicians than are the laws of many other states. The insurance companies, however, assert that the indemnities provided by it are excessive to such an extent as occasionally to convert injuries into sources of profit. It is difficult to please everybody. An attempt will be made to amend the New York act "to cover all occupations except possibly farming and domestic service; to include occupational diseases as well as accidental injuries; to reduce the waiting period from fourteen to seven days; and to require medical service during the entire period of disability."

There are certain peculiarities of the compensation laws of other states which are worthy of mention. The New Jersey law provides that in no case shall the combined bills of the hospitals and physicians exceed $50, and the indebtedness must be contracted within the first two weeks after the injury. This allowance is ample for the majority of minor injuries, but for many cases of major injuries it is manifestly inadequate. If the hospital bill reaches $50 the doctor gets nothing but the experience of caring for the case.

In Maine $30 is about the limit hospitals can expect to receive. Some of the hospitals of that state have adopted, in self-protection, the plan of not recognizing the insurance companies when it comes to the matter of settlement, dealing either with the employer or the injured man. This would appear to defeat the intent of the law.

The Pennsylvania act is not satisfactory to either hospitals or physicians. So far attempts to amend it have been unsuccessful. It provides a sum not to exceed $25 for medical and hospital care for the first fourteen days, unless a major operation is performed, when $75 is allowed. This allowance is too small and the period of liability too short. Another defect in the law is that corporations cannot be held liable for medical services unless the injured employee is attended by a physician designated by them. As it frequently happens that the company physician, for one reason or another, does not command the confidence of the employees, this provision is distinctly objectionable and unfair to them.

The Rhode Island law goes to the other extreme and gives the injured employee the exclusive right to select a physician. It is a reasonable question whether it is fair to the insurance company and employer not to allow them any voice in the selection of physicians. Conceivably a too sympathetic family physician, or an unscrupulous one, and a patient given to malingering might cause an insurance company no end of trouble and expense.

The Maryland act limits maximum liability to

$150, but it is hoped to increase this limit to $300. The Hospital Conference Association, recently organized, has succeeded in effecting an arrangement whereby the hospital bill is paid before that of the surgeon. If the hospital bill amounts to $150, the surgeon gets nothing. This is a little rough on the surgeon, but the hospital has been put to actual expense by the presence of the patient, whereas the surgeon has not. The conference also succeeded in having the hospital ward rate increased from $1 to $1.50 a day. Compensation cases are not regarded as charity patients, and the hospitals should be reimbursed at least to the extent of the average cost of caring for ward patients, which is certainly more than $1.50 a day.

The acts of Alaska, Kansas, New Hampshire, Washington, and Wisconsin do not provide for medical attendance, a serious oversight.

In Indiana, Kentucky, Maryland, New York, and Oklahoma, the charges of physicians and hospitals are not enforceable under the law unless approved by the compensation board or commission. In New York this has not proved a serious defect.

In California and Massachusetts, occupational diseases are included as personal injuries entitling the employee to compensation.

Judging from the letters we have received and the comments we have heard, there appears to be considerable dissatisfaction with the compensation laws in various states. Hospitals and doctors are not the only ones who are protesting. Numerous complaints are heard from insurance companies and employers. This is not surprising when we pause to consider the phenomenal rapidity with which these laws have been placed on statute books all over the world. It is not to be wondered at that mistakes have crept in and that there has been such a general lack of uniformity in the acts of the various states. The law is in a formative stage, and it is too early to expect perfection. Undoubtedly a few years hence it will deal more justly with all concerned, providing, of course, that constant agitation for its improvement is kept up by interested parties, and the present indications are that it will be. There is already evidence that the protests of physicians and hospitals are not without avail. Within the past few months six or eight states have amended their compensation acts to provide more liberally for both. While doctors and hospitals object strenuously to many of the fee schedules and to some of the administrative details, yet the majority readily concede that the fundamental principles of the law are unobjectionable and in harmony with present social and economic conditions.

The insurance companies maintain in New York City a "Workmen's Compensation Publicity Bureau" for the purpose of advancing and protecting their interests under the law. We do not advocate that the American Hospital Association shall maintain a similar bureau, but merely mention the fact to illustrate how big business meets problems of this magnitude.

The Opportunities and Needs of County Tuberculosis Sanatoriums

Dr. Leo G. Guyer describes in the *St. Paul Medical Journal* the work of the Minnesota county sanatorium system (also described by Robinson Bosworth in THE MODERN HOSPITAL for March, page 182). He says that provisions of the Minnesota law allowing state aid for both construction and maintenance have done much to encourage many counties to take definite steps toward hospital provision. During the two-year period preceding the announcement that the fund for new buildings was exhausted, thirty-two counties applied for and were qualified to receive state aid. Dr. Guyer adds: "There is, perhaps, no more important factor in the care of the tuberculous than training and instruction. No other patient requires training so much as does he; no other patient is in better position to take training and education. The typhoid patient is too sick to care about anything but his headache, or, in his convalescence, too hungry to think of anything but his appetite. The pneumonia sufferer is too busy breathing to give thought to anything but the pain in his side. But the consumptive is well 'from his neck up.' He has time to think about everything, has time to worry about everything, and he has time to do about everything—foolish and detrimental. He must, therefore, be instructed, trained, educated. He must know the truth about himself, at least sufficiently enough to recognize the gravity of his condition. He must learn to watch himself, for he cannot at all times have a nurse or physician at his call. He must be prepared for emergencies, such as hemorrhages, fever, etc. The consumptive needs nearly everything in the field of medicine—nursing, dentistry, surgery, medicines, hygiene, dietetics. He needs treatment for what is the matter with him. Let us give it to him!"

These, then, may be called the eight fundamental principles of public health nursing:

1. That only well-trained nurses should be employed.
2. That the nurses should not be distributors of material relief.
3. That there should be no interference with the religious views of the patients.
4. That the rules of professional etiquette should be rigidly observed.
5. That cooperation in all its forms should be recognized as of primary importance.
6. That suitable and accurate records should be kept.
7. That patients unable to pay for nursing care should receive free service, and that those able to pay for it should do so according to their means.
8. That the daily working hours of the nurse should be limited, in order that good work may be done and they themselves be kept physically well.

This number or classification of fundamentals is by no means final. Each year brings changes and developments undreamed of in the beginning, and requiring adaptability of method and administration if progress is to be made.—Mary S. Gardner, "Public Health Nursing."

ADDISON COUNTY HOSPITAL, MIDDLEBURY, VT.

A Home-like Hospital Set Amid Historic Scenes—Provision Made for Enlargement to Meet Future Needs

By HARRY LESLIE WALKER, Architect, New York City

THERE is at the present time no general hospital in the State of Vermont between the town of Proctor on the south and the city of Burlington on the north, and this building is intended to provide facilities for caring for the sick in the town of Middlebury and the surrounding country comprised in Addison County. Situated in Middlebury is Middlebury College, a rapidly growing institution with many fine modern buildings and an honored history reaching back to Colonial times. Here is gathered a large group of young men and women coming from all over the United States and who at the present time are provided with no hospital facilities whatsoever. A generous friend has offered to give 25 percent of the cost of the building and it is expected that before very long the remainder of the necessary funds will be provided.

Fig. 1. Addison County Hospital, Middlebury, Vt.

Owing to the lack of precedent and data as to the possible future use of the hospital it has been thought best to provide an administration and operating equipment ample enough to care for a considerably larger number of beds than are at present planned for. The administration has

Fig. 2. Addison County Hospital, Middlebury, Vt. Basement floor plan.

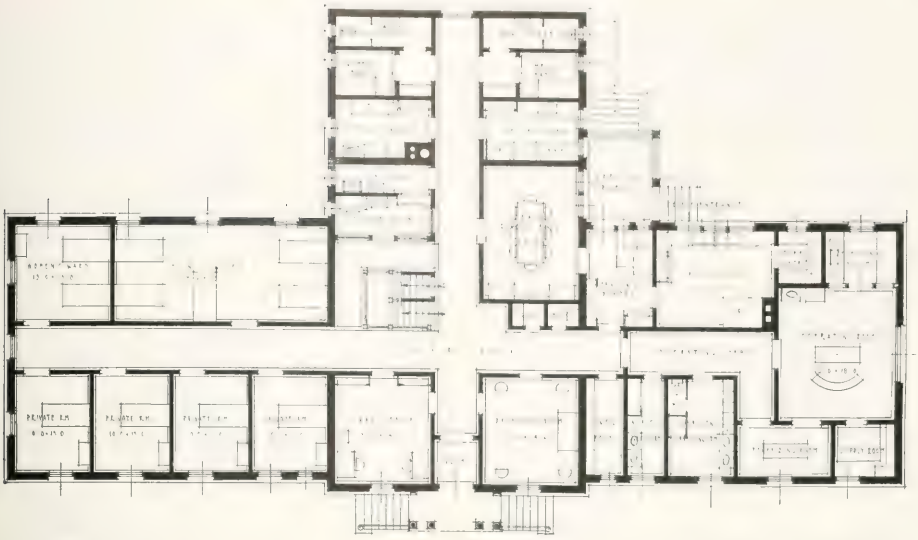

Fig. 3. Addison County Hospital, Middlebury, Vt. First floor plan. Entire women's ward and private room wing to be added at rear.

been placed in the center with the operating suite on the north end of the front of the building.

The south end of the front has been planned to provide for eleven beds arranged so that at first both men and women may be cared for in this wing.

The central portion has been made two stories high, thus providing rooms in the same building for six nurses and two maids, with their respective bath rooms. As the institution grows, these rooms might be used for convalescent patients and the nurses cared for in a separate building.

The future wing will be built extending from the center of the rear of the present building, thus bringing the beds into proper arrangement with the administration and utility rooms already provided in the central portion of the plan. When this is done the divisions in the south wing will be removed and this end of the building given over to men patients, while the new wing will provide for the women.

At present the plan provides for eleven beds, not including the possible ones in the second story, but the operating, utility, and administration facilities are ample for thirty or thirty-five beds, which would probably be well over the ultimate needs of the community served.

In the basement are arranged the boiler and fuel rooms, laundry, janitor's room with toilet, patients' clothes room, laboratory, drug room, disinfector room, room for future x-ray apparatus, and numerous individual spaces to be used for storage or other purposes as the needs may arise.

The first story of the building has the superintendent's office on one side, and the visitors' reception room on the other side of the main entrance. In the south wing are the patients' rooms, in the rear of the central portion the utility rooms

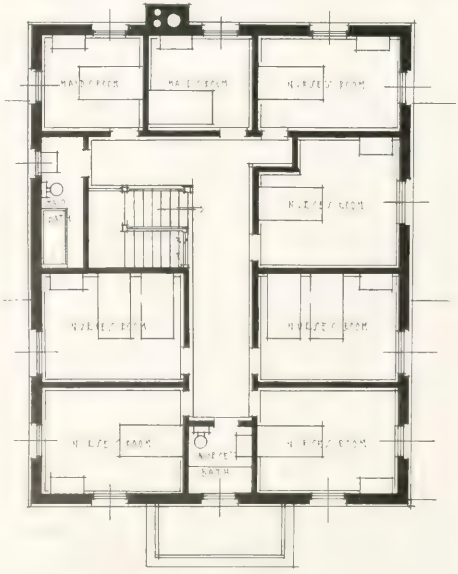

Fig. 4. Addison County Hospital, Middlebury, Vt. Second floor plan.

and staff dining room, and in the north wing is the operating suite. The rear entrance and service porch are placed in the northwest angle of the building, and from this porch ice may be placed in the refrigerators of the diet kitchen and the main serving pantry, without bringing it through the building.

The exterior is treated as a simple Georgian building, the walls being of hollow terra cotta blocks covered with stucco. The roof is of green slate and there are green shutters at the windows. The basement wall is of rough red brick and all of the porch and cornice woodwork is painted a warm gray, slightly darker in tone than the stucco. An effort has been made to handle the design of the exterior of the building so that it shall have a distinctly domestic character, in keeping with the surroundings in an old New England town. The ideal hospital building is essentially a home where the sick become well, and the small town hospital should, especially as to its exterior design, be kept as far as possible from the usual institutional character.

The interior is of non-fireproof construction with wood floors, excepting in the baths, toilets, and operating suite, where tile floors and wainscoting are used. The plumbing fixtures are of solid porcelain and of the latest design, and the heating system is a low-pressure gravity system with a separate tank heater for domestic hot water and a small high-pressure vertical boiler furnishing high-pressure steam for sterilizing purposes.

The estimated cost of the building, including architect's fees, is $45,000, which is approximately 30 cents per cubic foot.

THE PUBLIC HEALTH WORK OF A CHILDREN'S HOSPITAL

The Children's Hospital of Philadelphia Assumes Its Share of Responsibility for Educating the Public—The Department for the Prevention of Disease Works Through Clinics, Classes, and Visiting Nurses and Dietitians

By CHARLES V. DORWARTH, M. D., Physician to the Health Clinic The Children's Hospital of Philadelphia

THE idea is not new that a large percentage of deaths in infants and children is due to preventable disease. Educational methods are accepted as affording the most practical means of curtailing this unnecessary loss of life.

The Children's Hospital of Philadelphia has assumed its share of responsibility of educating the public by organizing a department for the prevention of disease.

This work is carried on in the thirtieth ward, which is a thickly settled residential section having a population of 29,000, including a large proportion of negroes. It covers an area of 0.519 square mile. In 1915 there were 562 births in the ward—a birth rate of 19.24 per thousand.

The department as organized includes the following:

1. A prenatal clinic.
2. A health clinic.
3. A physical development class.
4. Two visiting nurses.
5. A visiting dietitian.

THE PRENATAL CLINIC

The last report of the Federal Children's Bureau shows that in one year, in this country, 15,000 women died from conditions caused at childbirth, more than one-half of which are now known to be preventable. No estimate is made of those who survived only to suffer from a degree of preventable ill health.

The prenatal clinic sees to it that expectant mothers are properly cared for, so that they may bear healthy children and come through childbirth in good physical condition, able to nurse their babies. Many babies who need not have been bottle-fed are brought to the hospital for "regulation of feeding."

In the prenatal clinic the obstetrician in charge examines and reexamines each expectant mother at regular intervals. The blood pressure is estimated and urine frequently examined. He confers with the patient as to her habits of life and gives her instructions as to her personal hygiene.

The nurses repeat these instructions as they visit their homes and make it possible for the patients to carry out the physician's orders. The nurses report to the obstetrician on the living conditions, and the decision is then made as to whether home or hospital maternity service is to be provided. Nurses make arrangements for confinements.

As the report of the United States Census Bureau shows that 300,000 babies died before they were one year old, in 1914, it is important that the newly born babies be brought to the health clinic as soon as possible, so that the mothers may be instructed how to safeguard them in every possible way against the many dangers that threaten their health.

THE HEALTH CLINIC

The parents who bring their well children to

this clinic are taught how to keep them well. When a child is brought to the health clinic, the parent is first interrogated regarding the health of the applicant. If the child is well, admission to the waiting room is granted. There the clothing is removed and the weight and various measurements are ascertained. A complete physical examination is then made.

When there are indications that a further examination of the eyes, ears, nose, or throat is needed, the child is referred to that particular dispensary. When an organic lesion is discovered, the patient is sent to the medical dispensary for treatment. It is surprising to see how few of the children examined meet the requirements of a normally developed child. Malnutrition and lack of muscular development are commonly found. Existing social conditions often making these difficult to combat.

Patients discharged from the hospital are referred to the health clinic unless they return to their own physicians, or unless they are still in need of surgical or medical care, in which case they are referred to those dispensaries. Mothers are encouraged to bring all their children to the clinic for examination and advice.

THE PHYSICAL DEVELOPMENT CLASS

The object of this class is to assist any child who is not making normal physical progress to do so. Children whose muscles are relaxed, whose posture is poor, whose chests do not expand well, whose general nutrition needs to be improved are sent to this class.

The method used is either exercise or manipulation given to each child individually. The children thus acquire a more general use of the entire muscular system, resting the overworked muscles and bringing into play unused muscles. The nurse who observes the instructor as he gives the exercises in the hospital visits the homes to see that the mother properly supervises the children as they exercise.

VISITING NURSES

Many of the most serious cases seen in the hospital wards are the result of the parents' ignorance of the laws of health. The nurses visit the families in their homes and become their confidential friends, learning their innermost problems. When this problem is a financial one, the nurse learns the cause and endeavors to remedy it; when it is improper sanitation, it is reported to the proper authorities for correction. When another member of the family is ill, the nurse refers the patient to a hospital. She explains the physician's orders and sees that they are carried out. She also makes arrangements for convalescent care of children who no longer need hospital care, but who are not strong enough to go home. She teaches the mother the importance of cleanliness, the value of fresh air and regular habits of living. If she encounters suspicious cases of contagious disease they are referred to the bureau of health for observation.

A VISITING DIETITIAN

The importance of a well-regulated diet is not appreciated by all mothers. They do not consider the nutritional value of food; to them the only object of eating is to satisfy hunger. The children eat what they want, and eat when they want to. As a result we find malnutrition, severe gastro-intestinal disorders, and other conditions which undermine their health. The visiting dietitian teaches the mothers to purchase food suitable to their needs and within financial limitations, and how to prepare it. She explains the importance of regular habits of eating.

It has been the experience of our dietitian that in many of the families visited the diet has been too one-sided—too much fat, carbohydrate, or protein. Sometimes the quantity of food is too small. The visiting dietitian reports these conditions to the physician at the clinic and consults with him; a diet is then ordered that will meet the requirements of the patients.

A resident physician and nurse have been assigned to the department for the prevention of disease, to assist in the health clinic. Volunteer workers, clinical secretaries, and clerks have also assisted in the health clinic.

Two troops of Boy Scouts have acted as inspectors of stables as a part of a campaign against flies. They have secured the cooperation of the stable owners in complying with the law as outlined in the manure ordinance. Their work has proved most successful, as shown by the improved condition of the stables.

Lantern demonstrations have been given to the public upon various phases of infant and child life, and upon hygienic and sanitary subjects.

Miss Geraldine Borland, R. N., formerly superintendent of the Hanover Hospital, Milwaukee, has lately taken up the work of superintendent of nurses at the General Hospital, Kansas City, Mo.

Dr. C. W. Larrabee has reopened his private hospital at Helen, Ga., following the installation of new equipment, including an up-to-date x-ray outfit. Dr. Larrabee believes he now has one of the best small hospitals in the South. Twelve patients can be accommodated.

INDUSTRIAL HOSPITAL MANAGED BY EMPLOYEES

Missoula (Mont.) Institution Built and Operated by Benevolent Organization of the Northern Pacific Railroad—Formerly Conducted by Road Itself

By H. B. SMITH, President Northern Pacific Beneficial Association

THE first hospital of the Northern Pacific Beneficial Association, on the Central Division, was built by the Northern Pacific Railway Company in the early eighties and was later acquired by the Northern Pacific Beneficial Association. It was located in Missoula, in one of the beautiful valleys of western Montana. The grounds comprise a city block, located close to the foothills. Trees were planted at an early date, so that the site is now entirely surrounded by large trees. Flowering shrubbery and roses border the lawns, every advantage having been taken to beautify the surroundings.

In 1892 the original building was destroyed by fire, to be replaced the following year by another of similar construction. An addition to accommodate forty patients was constructed in 1902, this being also nonfireproof. The following year a small detention building was added to the group, to handle contagious cases. The nurses' home was built five years later, followed the next year by the laundry; a modern heating plant with two 100-h. p. high-pressure boilers was erected in 1913. Of the group, the nurses' home, laundry, heating plant, and detention ward will be retained, but the main hospital building is now being replaced by a modern fireproof structure. The home of the chief surgeon will be erected soon after the main building is constructed.

Industrial Hospital of the Northern Pacific Beneficial Association, at Missoula, Mont.

The hospital building and grounds belong to the Northern Pacific Beneficial Association. The hospital has a restricted staff. The chief surgeon has general supervision, with one assistant and two interns. The present nursing staff consists of seven graduate nurses and three experienced male nurses.

Hospital benefits are confined strictly to members of the Association, although dependent members of families of those belonging to the association may be admitted to the hospital, as pay patients, at a nominal rate, should accommodations permit.

Upon the recommendation of the president, a committee from members of the board of managers was appointed to investigate the situation as to the construction of a new building, and upon the recommendations of this committee the board decided to construct a modern fireproof building immediately, authorizing an appropriation of approximately $125,000 for this purpose.

In May, 1916, final plans for the building were submitted by Mr. Bassindale to the board of managers and accepted. Subsequently a number of minor changes have been made, but for the most part the construction will follow the original plans. Bids for construction were opened late in June, the contract for the general contract work being awarded to Olson & Johnson Company; heating and plumbing to the James Smyth Company, of Spokane, and electric work to the A. Hubbard Company, of St. Paul, Minn.

The wing which was added in 1902 has been retained temporarily for hospital purposes; the remainder of the main building has been razed. On completion of the new building the wing will also be razed. No marked changes will be necessary in the walks or entrances to the grounds, as the new building occupies the same location as the part torn down.

The new building will accommodate 72 patients, and, to allow for some increase, the sun rooms will be so arranged that they can be converted into wards, making a total capacity of nearly 100.

The building will be fireproof throughout, basement of concrete construction, first floor Bedford stone, and the remaining three floors brick, with

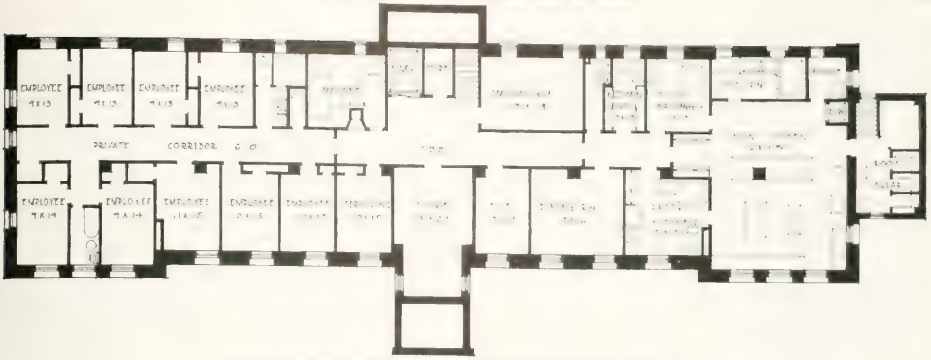

Fig. 1. Northern Pacific Beneficial Association Hospital. Basement plan.

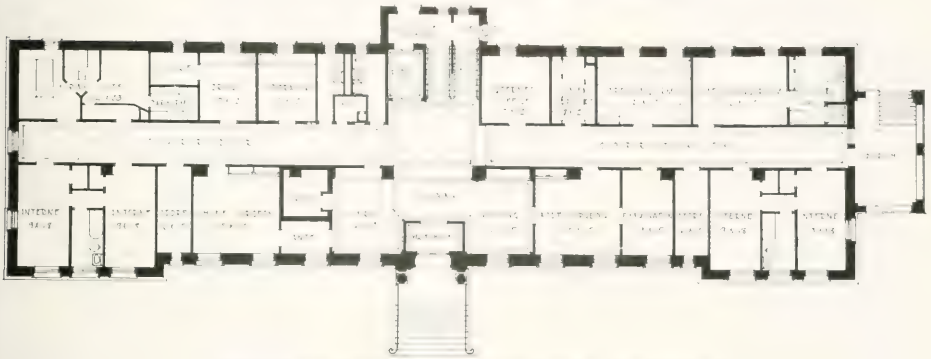

Fig. 2. Northern Pacific Beneficial Association Hospital. First floor plan.

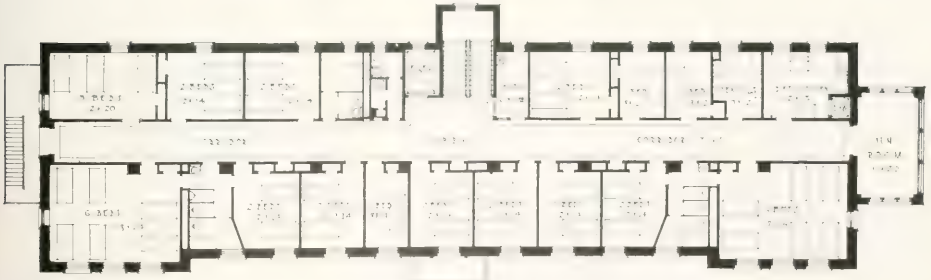

Fig. 3. Northern Pacific Beneficial Association Hospital. Second floor plan.

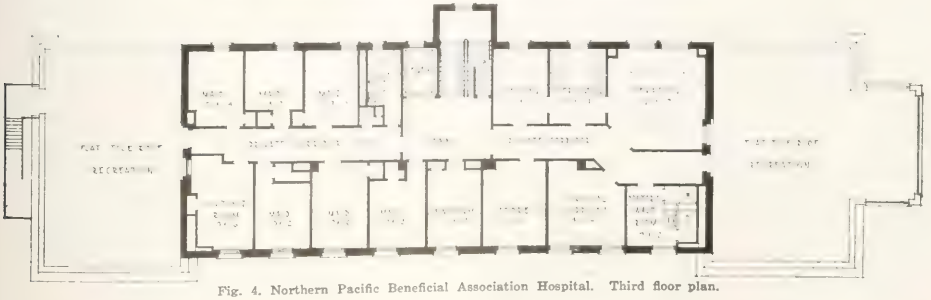

Fig. 4. Northern Pacific Beneficial Association Hospital. Third floor plan.

tile roof. About one-third of the building has flat roof, covered with flat roofing tile and surrounded by high parapet. This roof is to be used for recreation. All floors, except a few store rooms, are of terrazzo. Plaster walls and ceilings are treated with enamel paint, and sanitary metal door frames are provided.

Every effort has been made to arrange each floor and department in the most convenient manner in order to save time and labor throughout. All departments will be connected with intercommunicating telephones, with outside connections on each floor. All rooms and wards will have silent signals to the chart rooms. All floors will be served by electric passenger and service elevators, from main kitchen to all floors. In the basement are located main kitchen, store rooms, smoking room, help's dining room, disinfecting room, rooms for male help, bath, and laboratories, all well lighted and ventilated.

On the first floor are the office, administration department, staff dining room, x-ray room, dressing room, drug room, laboratory, and intern suites.

The second and third floors are duplicates. On each of these are small wards, single and double rooms, diet kitchen, chart room, living rooms, baths, etc. At the east end of each of these floors, opening from the hall, there is a sun room, which is so arranged that it may be converted into a ward.

The operating room, sterilizing and dressing rooms, sewing room, surgical stores, and rooms for female help, such as maids, cooks, and waitresses, are on the fourth floor.

The buildings and departments which have been retained are satisfactory for present needs. The nurses' home has eight large rooms, ample storage room, and bath. The laundry has recently been repaired and refitted to some extent, so that upon the completion of the new hospital building we shall have an entire group of buildings sufficient to meet all requirements.

Oleomargarine

The term "margarine" was at first used to designate a mixture of the fats composed of such proportions of palmitine and stearine that it closely resembled margaric acid. Later, when soft beef fat or oleo oil became an important component, the mixture was called "oleomargarine" or "oleo." "Margarine" remains, however, the legal term for butter substitutes in Great Britain.

The name "oleomargarine," remarks A. D. Holmes in the *American Food Journal*, does not at present indicate the composition. The principal fats used in its manufacture in the United States are oleo oil, neutral lard (that is, a specially rendered lard), and cottonseed and other oils. All these ingredients must be pure and prepared with care in order that none of them shall have any marked taste or odor. These are mixed in such proportions as will give the final product a melting point very near that of butter. After being thoroughly mixed, the fats are churned with a small quantity of milk and sometimes cream, the proportions of these used depending upon the quality of the product desired. In the preparation of high-grade oleomargarine, varying quantities of butter are also added. The resulting product is then washed, salted, and worked as in ordinary butter-making processes. Owing to the ease with which a highly colored oleomargarine might be sold as butter, it is illegal to sell oleomargarine unless it is plainly labeled as such, and the practice of coloring it to imitate butter is discouraged by a heavy tax. Oleomargarine is not used as extensively in this country as in Europe, where it serves for both table and culinary purposes. If prepared from pure materials and under sanitary conditions, it is a wholesome fat, which, according to European investigators, is well assimilated. It has an energy value of about 3,500 calories per pound.

ST. ANTHONY HOSPITAL, CARROLL, IOWA, HAS STATE UNIVERSITY BRANCH LABORATORY

Bacteriological Work, Pasteur Treatment, and Many Other Departments of Work at State University Available in Carroll Hospital Now—Dr. Jessie B. Hudson, of Clinton, in Charge

St. Anthony Hospital has made another long stride toward becoming one of the biggest institutions of its kind in the country in the securing of the establishment of a branch laboratory of the state university within its walls. The necessary apparatus and equipment have been installed and everything is ready for business.

The work is in charge of Dr. J. B. Hudson, from Clinton. Dr. Hudson was for four years in charge of the laboratory work in the State Board of Health Laboratory, Iowa City, and her standing in this line of endeavor is well established in Iowa. She comes with the recommendation of the leading medical men of the university, is a doctor of medicine, and has a M. S. degree, and her work will make a great addition to the medical and hospital facilities of Carroll and all western Iowa.

Other towns and cities in this part of the state made a strong effort to secure the location of the branch laboratory, but Carroll was finally selected because of its central location and its excellent hospital facilities.

Besides bacteriological tests, the laboratory is prepared to give the Pasteur treatment for rabies. Work in vaccines, blood serums, and tissue work will also be done, and the diphtheria and typhoid tests of this part of the state will be brought to Carroll instead of being sent to Iowa City. In fact, the local branch is designed to relieve the university from this sort of work from western Iowa, and it also gives physicians in this section of the state much better and quicker service than they could otherwise obtain.

It should be borne in mind that this work is being done directly under the supervision of the state, that it is entirely independent of the work of any local people except that the laboratory equipment is the property of the local hospital and the work carried on in connection with it.

The new department will draw its work from all over the western part of the state, not from Carroll alone, and its chief benefit to Carroll will be in the bringing of more people to this city for treatment and the enlargement of the scope and territory of St. Anthony's.

THE FAMILY AS THE UNIT OF PUBLIC HEALTH WORK

The Instructive District Nursing Association of Boston Has Organized Home Care for Families—Some of the Results—Regeneration of Families Under the Friendly Encouragement of Visiting Nurses

By MARY BEARD, R. N., President of the National Organization for Public Health Nursing, Director Instructive District Nursing Association, Boston

THE modern public health nurse is useful just so far as she realizes herself to be concerned with the interests of preventive medicine. Indeed, I think she may claim the title of public health nurse only if she has as her first conception of her daily duties the conviction that upon her observation and foresight depends the health of the whole family into which she may be called for one or another purpose.

The family as a unit more than any one individual member of it must be her thought. Health

Fig. 1. One of the nurses of the Instructive District Nursing Association of Boston.

and how to produce it must be her effort more than the relief or cure of any one disease or defect.

Of course, the correction of defects may be the pivot upon which family health turns. The deplorable condition of teeth so universally found by public health nurses sometimes makes her sure there is no other avenue to health but the dentist's chair, but, though this may be true of dentistry and of other specialties, the public health nurse who loses the all-round view of her families in pursuit of any one object will soon limit her usefulness.

We are in the beginning of a new era. The profession of nursing after the war is over will certainly have undergone some fundamental changes. Because a universal need is making all sorts and conditions of men and women stop and think, because it has become necessary for us to take account of stock of all our resources, health and its significance has suddenly become a subject for intelligent thinking with hundreds of people who have never before had time to learn what this new public health movement means. Many people are learning now for the first time of the effort to make health as much a matter of course with American families as education has been for generations.

Mr. Havelock Ellis, in one of his "Wartime Essays," "The Nationalization of Health," says in discussing the subject of health insurance:

> "How necessary it is becoming that the extension of medicine and hygiene in the national life should be accompanied by a corresponding extension in the national government. If we had had a council of national health, as well as of national defense, or a board of health as well as a board of trade, a minister of health with a seat in the cabinet, any scheme of insurance would have been framed from the outset in close consultation with the profession which would have the duty of carrying it out. No subsequent friction would have been possible."

It is not too visionary to suppose that some such development will be a result of the mental stimulation of the present stirring times. The National Red Cross of America has been collecting millions of American dollars to be spent not only for our own soldiers and sailors and for their families, but also to be directed to the urgent needs of European countries. No part of these millions is to be spent without serious study of the particular need presented. In each instance, too, the War Council of the Red Cross will receive recommendations from a body of experts selected to make the study.

Such well-considered action will bring about the establishment of many sanitary units of various kinds, which will utilize those well-tried means and plans of health work that have for some time been proved and recognized by the few. To put it another way, publicity and Red Cross money will serve to make universal the instruments which public health officers have proved to be good and have been trying to put into use.

The most effective business men in the country have stopped everything else to bend all their powers to the consideration of spending here and in

Europe the money so terribly needed by the people. Conservation of resources means first the conservation of the health of man. When this picked group of men whose interests are now bent upon the consideration of the public health go back again to the usual pursuits of life, they will not be indifferent to the waste of life about them, and a wonderfully educated public opinion will be the result.

The modern commissioner of health has struggled long to create a public opinion strong enough to enable him to take those very measures which today he is able to accomplish without effort. Indeed, money is being put into his hands to hasten these very plans. All of which is by way of introduction to the new public health nurse on whom very much of this work rests and must rest.

She is a result of the process of evolution and was only thirty years ago a bedside nurse for "the sick poor" of our large cities. Thirty years ago the Sick Poor were entitled to capital letters and

Fig. 2. In almost every home the public health nurse finds that dentistry is needed.

belonged to a class in the community utterly unlike all the other men and women. The realization that social conditions limit and control health to a great degree has given our modern legislation a new turn, as we see in the laws for mothers with dependent children, workmen's compensation laws, and the agitation for the several forms of social insurance.

But more directly modern life and knowledge has turned our bedside nurse to the colleges, there to be taught to be a "social nurse" and an instrument to accomplish the ends of preventive medicine. One large hospital (the Massachusetts General Hospital) has lately arranged a special course for young women who want to become public health nurses. The first two years in the hospital are so planned that the third year may be given up to the special study of public health nursing.

Many groups of people administer public health nursing today. Standardizing its administration is one of the things that will come quickly some day when public opinion has been still a little more roused.

At present one finds a city or state administering it, several private societies in one town will be doing each a separate phase of it, boards of education will be found directing the school nurses, and antituberculosis associations directing their separate groups of nurses.

However varied these activities may be, the true public health nurse will be found to be doing *family health work* wherever she goes and to be always observing and teaching the laws of health in order that she may prevent the inevitable disaster which follows disobedience to these laws.

The Instructive District Nursing Association of Boston publishes in its thirty-first annual report the following figures:

REPORT OF THE NURSES' WORK

From February 1, 1916, to December 31, 1916, 133,256 visits were made to 13,430 patients by 84 nurses. Of these, 699 patients met the full expense of daily visits; the Metropolitan Life Insurance Company paid for visits to 4,180 of their policy holders; 2,610 patients partly paid for the visits made to them; and nursing was given without charge to 4,659 of the very poor.

There were 2,186 expectant mothers visited periodically, examined, and advised how to prepare for the coming baby.

The number of babies and their mothers given nursing care for the first ten days of the baby's life was 1,548.

Old people and chronic invalids to the number of 1,227 were cared for.

The victims of pneumonia, bronchitis, tonsilitis, measles, diseases of the heart and other illnesses, to whom nursing care was given numbered 7,187.

There were 3,927 children on the nurses' lists. Next year this number will be still larger, for in February, 1917, the nurses added to their other work the home care of children paralyzed in the epidemic of infantile paralysis last summer. Auxiliary committees of residents have been formed in Hyde Park, Jamaica Plain, Roslindale, West Roxbury, Dorchester, Brighton, Charlestown, and East Boston, and are active in promoting the work of their districts. In the eleven months of this year the expenses have increased $5,290 over those for the twelve months of last year. This is accounted for by more patients, more visits, more records, and increased cost of all supplies. The nurses are on the watch for conditions which produce disease and for suspicious symptoms, the early recognition and treatment of which may prevent serious illness.

Seventy-two nurses have studied the special requirements of public health work under the Education Department, and have gone out to thirteen states and to Canada to make their knowledge of

practical value in the great campaign for health.

The method of organization of the work is through the branch stations, over each of which is a supervising nurse. In Ward 24, Hyde Park, we have established a health center. Hyde Park is about an hour's ride in the street cars from the center of Boston. It is a ten-cent carfare, which makes it somewhat isolated. In the station are seven nurses, all of whom have had special education as public health nurses in addition to their nurses' training. The population of Hyde Park is 22,664. There are 13 doctors, of whom 11 call upon our services. A local committee of representative Hyde Park people are active in raising money for the maintenance of the work and are invaluable in the practical help they give the nurses in their daily work.

The general idea of administering the nursing service from the center is that known as generalized public health nursing, which means that so far as possible, only one nurse shall visit any home for the purpose of performing any health function whatever.

Fig. 3. The public health nurse finds the mother as eager to learn as if this were her first baby.

No child hygiene work had previously been attempted in Hyde Park. In Boston this branch of public health work is done by a separate society known as the Baby Hygiene Association.

The Instructive District Nursing Association obtained the interest and cooperation of this association and is establishing a well baby clinic at Hyde Park Center. All the home visiting is done, not only by a separate staff of baby nurses, but by the public health nurses already visiting in that particular locality. Both the medical director and superintendent of nurses of the Baby Hygiene Association have general supervision of the clinic.

During the six months, January 1 to June 30, 1917, 47 cases received prenatal care, and 89 confinements were cared for. Twenty-three conferences were held during the twenty-six weeks; the total attendance at the conferences (registered babies) was 347. The average attendance at the conferences was 15; the average age at the time of admission was 15 weeks.

Registered babies received, in all, 1,107 visits. There have been no deaths, and no baby has been seriously ill, although two have had bronchitis and one pyelitis.

All milk modifications are prepared in the homes, and all milk is delivered at the home. The mothers enjoy the home modification, and as a rule are very teachable.

The nurses do bedside nursing, prenatal nursing, well baby nursing, and factory nursing. A tuberculosis clinic is held in the center under the direction of the Boston Consumptives' Hospital, but the nursing from this clinic is at present carried on, not by Instructive District Nursing Association nurses, but by a Boston Consumptives' Hospital nurse, who has desk room in the center. To complete the plan, both this nurse and also the Hyde Park School nurse should turn over their home visiting to the nurses of the Hyde Park Center.

One great advantage of this method is that all the people of the community soon learn to connect the idea of health and health visitors with the center and to call freely upon the supervisor, who keeps regular office hours three times a day for advice and help. No one is so quick to refer a patient in need of medical care to a doctor as a good nurse, and the doctors of Hyde Park find the center a great convenience in their practice. In face of the shortage of nurses and doctors because of the war, this economical method of administration of health work deserves attention.

The following true story is typical of the relation established by a good public health nurse and is so far descriptive of the many functions of these workers that I am quoting it here:

> We made a visit on a dull winter afternoon in a tenement of four rooms. There was a kitchen, dreary and dirty; two boxes of bedrooms, ventilated and lighted, if we may use those words, only by a door with a few panes of glass in it, opening from each into the kitchen; the fourth room unused because of big holes in the floor opening into the cellar.
>
> We found a woman, old beyond her years, below par mentally, and apparently addicted to the use of alcohol, holding a child, pale and emaciated—two years old and not yet able to walk. Two of the other four children were at home with colds, healthier looking, but dirty. Further acquaintance completed the picture of the family by showing the father to be an able-bodied man, good-natured with his family, mentally superior to his wife, but intemperate, making small wages. Inquiry at the Confidential Exchange brought out the fact that the family had been known to the Associated Charities and to the Society for the Prevention of Cruelty to Children because of the intemperance of the parents had led to neglect of the chil-

dren. It is not strange, therefore, that when this family was brought to the case committee its members, socially trained or not, almost unanimously voted it a hopeless family and felt that the one solution was to break it up. What hope was there for such a family in those surroundings? What possible chance for the coming baby? Only the nurse and priest had hopes; they asked for another trial. A brief sketch of the outcome of that trial justifies their faith. The doctor on the committee gave medical attention to the mother and the sickly two-year-old. The board of health aided by condemning the tenement and telling the family to move. This they did between visits of the nurse and were lost for a while. The neighbors said they had moved "one or two streets, over near the saloon on the corner"—very indefinite information for that locality. However, one of the children saw the nurse on the street and ran to greet her, and connection was restored.

Fig. 1. The nurses have added to their other work the after-care of infantile paralysis.

The new tenement was an improvement and was cleaner. The sisters in her church gave Mrs. C. a picture or two, which, with curtains for the windows, quite stimulated her to tidiness and to pride in her improved condition. Shortly after this she gave birth to a still-born child and recovered normally. Things on the whole were a little better, not much, because, while the mother was doing better, the father was out of work most of the time, and drinking. The one great thing that did count was that the nurse was considered now a real friend, and so had sufficient influence to take decided steps with the father. She found him at home one morning very intoxicated, very genial, and very proud to introduce "my wife and my five children."

"If," said the nurse, "you are so proud of your wife and five children, why not brace up, take the pledge, and go to work for them?"

After some effort to postpone it until he had had one more drink, he decided to take the pledge at once if the nurse would go with him, or at least walk behind him. He felt he was in no condition for her to walk with him. So the procession of two moved up the street, C. ahead, waving his cap in encouragement to the nurse behind as each saloon was victoriously passed. That was nearly a year ago. C. has kept the pledge, even though he is now a longshoreman, and this kind of work conduces to hard drinking. He has provided for his family to the best of his ability, his wife has kept the home clean, and together they are doing their best for the children.

He has regained some pride in his manhood and has refused to receive aid from relief-giving agencies, even when work has been scarcest. At the time when their need was greatest the wife went out scrubbing, but only until her husband got work.

At Thanksgiving the landlord, who had watched their upward struggle, returned a dollar and a half of the four dollars C. paid him toward the rent bill. Mr. C. gave his wife fifty cents and kept the dollar. A little basket from the Fruit and Flower Mission found its way there on Thanksgiving Day. There is never more in these baskets than a few delicacies beautifully arranged, but the fact that it had come had a regenerating effect on Mr. C.

"Where did you get that, Mary?" he asked. "Well, if you've got that I'll have to give you this, too," he added, after a minute, and pulled out the dollar bill he had meant to save because "it makes a man feel good to have something in his pocket." "Take that and buy a chicken to go with the things."

Three years later, the last report from this family shows that they are living in a very pleasant apartment of five rooms. Mr. C. is going to night school and so is his son, Johnnie, who, although 16 years old, had never learned to read or write. Mr. C. has joined the Home Guard.

The Place of a Psychiatric Clinic in a Prison System

Dr. Bernard E. Glueck, director of the psychiatric clinic at Sing Sing Prison, in a recent number of the *New York Medical Journal*, writes that there was no well-defined precedent to follow in starting the Sing Sing clinic; the problems were met according to individual reaction and not according to rules. The functions of the clinic are therapeutic and reformative so far as the inmates are concerned, and educational so far as outsiders are concerned. The aim at Sing Sing is to keep alive the prisoner's initiative and self-expression; men come to the clinic voluntarily in states of depression. No cases of mental disorder have developed within the prison within the past four and a half months. Although crime is a problem of behavior, and information regarding it is to be sought in observation of the individual who has behaved in a criminal manner, prisons have not yet been made available as clinical material for teaching. The psychiatric clinic is also an agency for propaganda and education in a broader sense. Since August, 1916, for instance, the clinic has furnished to the parole board reports of examinations of the men about to be paroled, and these reports have been consulted before the paroles are issued. Moreover, the psychiatric clinic has had an influence as a constructive and reformative agency. The psychiatric examinations have been found of great advantage in helping the man to reform.

A large percentage of the prisoners were found physically or mentally defective. Seventy-four percent of fifty consecutive admissions were found suffering from one or more of the following disabilities: syphilis, mental defect, alcoholic deterioration, morphine deterioration, and insanity.

A UNIQUE ATTEMPT TO EXPRESS MEDICAL SERVICE WITHOUT CHARITY

Under a Gift by Mr. E. W. Scripps, Physicians of San Diego Have Organized a Diagnostic Clinic With Some Promising Features—Some of the Details

By ROBERT POLLOCK, M. D., San Diego, Cal.

IT has been observed by many and commented upon by not a few that the non-paying classes in any general hospital get distinctively better diagnosis and usually better treatment than those a little higher in the social scale. The latter insist on paying their way, although forced by the limitations of their income and a lack of flexibility in our medical service to stop far short of what their cases actually require.

It is an ever-present question how we can serve these classes more satisfactorily. If, through hospital or clinic, we furnish them adequate service at a price within their reach, we are likely to do so at the cost of underpaying the physicians who give the service, thus simply expressing another kind of charity.

It may be that, in time, we shall all pay for such service by direct taxation, but attempts in this direction would at present draw considerable opposition. A problem demanding our best thought is how to give to the family of the workingman and the small-salaried classes comprehensive diagnosis and adequate treatment at a cost commensurate with their income, and still keep the endeavor free from charity by paying the physician a fair price for his services.

An attempt to solve this problem has been started in San Diego by Mr. E. W. Scripps, a newspaper owner and philanthropist of nation-wide reputation. While it was his hope eventually to see such intelligent expression of this idea on the part of the medical profession as to make it a self-supporting movement, he was willing at the start to meet annually such deficits as might be unavoidable. His conception of service included a clinic where diagnosis of intricate cases could be made by a staff of specialists, and a hospital in which treatment of all kinds could be carried out. This hospital would receive patients from any reputable physician provided the cases belonged to the social classes he elected to serve.

The initial unit in the expression of his ideal took the form of the San Diego Diagnostic Group Clinic on the John P. Scripps Memorial Foundation. Property owned by him at the time, a well-built residence in a central location, was remodeled and equipped to suit the requirements of the clinic. The ground floor, consisting of five large rooms, comprises the administration offices, two large, well-equipped examining rooms, and a consultation room, where the members of the staff meet daily to discuss the results of their examinations. The second floor contains accommodation for six patients and for the three trained nurses who serve the patients, take histories, and aid in many ways in the examination of the patients. The third floor is occupied by the butler, who, with his wife, prepares and serves the meals and takes care of the house and grounds.

The examining rooms are equipped with every modern apparatus that a first-class hospital would consider necessary to complete, accurate diagnosis. At present most of the laboratory work and all of the x-ray work is done at their laboratories by the men representing these departments. The accompanying illustrations suggest in some measure the arrangement and equipment of the building, as well as emphasize what may be done temporarily without the erection of an expensive hospital plant.

Fig. 1. San Diego Group Clinic building of the E. W. Scripps Memorial Foundation, given by Mr. E. W. Scripps.

No attempt is made to reach a diagnosis by intuition. Each patient—and the cases are all problem cases—has his history carefully taken and is then assigned a room to be used during his stay in the clinic, which is until every member of the staff has carefully examined him. Each recognized department of medicine, including dentistry, biochemistry and radiography, is represented on the examining group, which consists of seventeen specialists. The word "specialist" is here used in its broadest sense to include any physician who has demonstrated his fitness to examine and give an expert opinion on a special

field. An effort is made to include on the staff all men eligible under this construction, with a result that, of a total membership of 120 in the county medical society, 60 physicians, or a total of 50 percent, are represented on the staff. These serve in relay groups for a month at a time.

Each member of the group, on completing the examination of his particular field, dictates his findings to the nurse-stenographer, who casts them into a report for use at the general discussion. The various members of the group on service are served lunch daily in the clinic dining

Fig. 2. Main examining room of the San Diego Diagnostic Group Clinic.

room, and at its conclusion spend an hour discussing the cases who examinations have been completed. With one member acting as chairman for the month, each in turn refers to his findings and expresses his opinion as to their bearing on the complaint of the patient. When a composite diagnosis has been satisfactorily reached, the chairman dictates it in proper form to the stenographer, who mails a copy to the physician referring the case to the clinic. A suggestive outline of treatment is included when deemed desirable. No cases are taken for diagnosis unless referred to the clinic by a physician. The referring physician is always invited to be present at the discussion of his case. The cases while in the clinic are looked upon as being still in charge of the referring physician, and his interests are carefully guarded at all times.

A lump sum is charged the patient for the diagnosis, which sum covers the expense of his stay in the hospital. Thus, while it is in the interest of economy to complete the diagnosis as expeditiously as possible, when the patient's stay is necessarily prolonged he is not made to feel that his bill is being increased. The amount of the fee is based on the monthly income of the patient and is required invariably in advance. This fee ranges from $10 to $25 per patient, and at present the cost to the clinic of making a diagnosis is much in excess of the fee paid by the patient.

In conclusion, I would call attention to a few of the distinctive features of this movement:

It is planned entirely in the interests of the man of small income.

It is expected that only cases will be referred to the clinic which have already proven themselves troublesome diagnostic problems.

Previous diagnoses and opinions of the patient or his friends are not allowed to bias the examiner, as each specialist examines and reports only on the field of diagnosis assigned him. It is only in the general assembling of all the data that the composite diagnosis is thrown into prominence.

There is little possibility for "snap" diagnoses.

Many defects of the individual are brought to light, which, while not bearing directly on his present complaint, are valuable data for the patient and his physician to preserve.

Looked at purely as a precautionary measure, such a diagnostic scrutiny once a year is a valuable expression of preventive medicine.

The physicians of our staff are strongly enthusiastic regarding the cultural value to themselves of the discussions held over these cases.

Fig. 3. Dining room, where, after luncheon, the members of the clinic spend an hour discussing the cases examined.

Where so large a percentage of the local medical profession is enjoying this cultural development, the effect upon the whole community in the way of raising the general standard of medical service is bound to be noticeable.

As the patients are asked to pay a relatively small fee, and as the overhead expense until the building of a hospital must be entirely borne by the clinic, a deficit seems inevitable; and the staff for the present has elected to serve without remuneration. Its members, however, feel amply repaid by the cultural effects above referred to, as well as by the privilege afforded of having their problem cases thoroughly diagnosed for a modest fee and returned to them for treatment.

STANDARDIZATION OF HOSPITALS—CLASS IV, SMALL SEMIPUBLIC HOSPITALS

Semipublic Hospitals of Fifty to One Hundred Beds the Most Numerous Class in This Country—Advantages and Drawbacks—Number of Nurses Desirable

By JOHN A. HORNSBY, M. D., Chicago, in Collaboration with MISS MARY WHEELER, Principal of the Illinois Training School, Chicago; DR. SOLOMON STROUSE, Former Pathologist in and now Member of the Medical Staff, Michael Reese Hospital, Chicago; MISS RENA S. ECKMAN, Former Dietitian, Massachusetts General Hospital, now of Teachers College, Columbia University, New York; DR. J. T. CASE, Roentgenologist, Battle Creek, Mich.; DR. EDWARD S. BLAINE, Roentgenologist, Cook County Hospital, Chicago; MR. E. C. LARSON, Former Accountant, now Assistant Superintendent, Michael Reese Hospital, Chicago; MR. MICHAEL M. DAVIS, Jr., Director, Boston Dispensary, Boston, Mass.

THIS month we are to discuss one of the most important classes of hospitals in this country—Class IV under our schedule, semipublic hospitals of 50 to 100 beds.

There are probably more hospitals under this class in this country than in any other class that we have noted in our schedule, and but for one or two rather important differences we should increase this class numerically by the addition of small public hospitals of like size. Because of the necessity resting on these public hospitals to accept free patients to be paid for out of general taxation, we shall have to discuss this class at another time; most of these public hospitals do not accept pay patients at all, and the controlling fund in the management of these public hospitals is usually some representative of the tax-paying public. So we shall have to confine our discussion to the semipublic institutions controlled usually by a board of trustees selected by some hospital association or group of financial supporters, and provided with funds by annual subscriptions, by personal gifts and bequests, by funds from endowments, and by earnings from paying patients.

These small semipublic hospitals are usually better institutions than public general hospitals of like size because they are untrammeled by politics, usually free from any form of favoritism, and are conducted usually by wholly disinterested people who hold office usually for long periods of time, and who come eventually to have very well-rounded knowledge of hospital work. Here and there we are bound to find a trustee or staff member who will use the hospital for his own selfish purposes, but the baneful influence of this one-man control, and that a self-interested control, is rarely very serious, and there is far less of it nowadays than there formerly was, because the public generally is coming to appreciate its hospitals, and the intelligent members of the community can usually put a stop to any hampering influences by their control of the purse strings.

The schedule for the marking of this class of hospitals does not differ from that which we are using throughout, but the requirements under the various department heads are different, and we shall now attempt to outline some of the things in each department that we have a right to expect in a hospital of this class.

THE MEDICAL STAFF

While the amount of material, that is, the number of patients, is smaller in this than in hospitals of larger size, the patients themselves are quite as important and, being fewer in number, can perhaps be given a little more individual attention. If the medical staff is composed of the right sort of men, and if these men apply themselves diligently to the hospital work, and if they keep abreast of the times and the literature of their profession in the several departments, the patient in this class of a hospital has a right to expect just as good care as he would get in a large metropolitan institution, even a teaching hospital, with one slight difference, viz., that the men in this small hospital will probably not have had quite the same experience and will usually be not quite so well read and so skilled in their work as men in larger institutions, especially men who have been kept up to their best by the necessities of teaching requirements—men who have had to keep themselves on keen edge by the stimulus of the student body. This handicap in these community hospitals is also passing away with the new order of the present hospital era because its staff members are getting out of the doldrums of their own institutions more and more and are attending conventions, visiting hospitals and clinics, and in other ways keeping their minds bright and fresh and up to date by association with their fellows in the profession. This picture rather implies a great promise for patients in this class of hospitals.

There is no reason why the staff of this hospital should not be organized in the same way as in hospitals we discussed last month—that is, those of the larger size in the same group, but with perhaps less elaboration. There can easily be a surgical service with a sufficient number of men to perform the surgical work, a chief or active head of the surgical staff and associates, whose office

necessitates his paying attention to the administrative things that have a bearing upon the welfare of surgical patients. It is his duty to see that the operating room technic is kept up; that the sterilization of materials is efficient; that the record-keeping is properly done; that the nursing is what it should be; and that the surgical equipment and facilities are the best that can be afforded.

The same sort of organization can go through the other departments, and the specialties can be represented quite as effectively as in a very much larger hospital.

If the men on the medical staff are chosen for their ability, energy, and enthusiasm, and if there are no drones and no "has-been's," even though these latter be men of wealth and large practice and wide influence, then the marking for the staff should be high, and if the staff is well organized so that efficient team-work can be done, and so that cases can be promptly and effectively referred from one service to another for examination and diagnosis, then these points, too, should be given expression in the marking; and in proportion as these requirements are not met by the staff, then the marking must be low.

The House Staff.—It is becoming extremely difficult for hospitals of this class to secure sufficient interns from high-class schools—and almost impossible unless the hospital has the reputation of being among the best in its class. It has been figured out pretty conclusively that an intern cannot give efficient service under the direction of the attending physicians to more than 25 patients even in a large ward; and with the usual conditions operating in a 50- or 100-bed hospital, with many attending physicians whose requirements and the methods vary greatly, good intern service cannot be performed by one man for more than 12 or 15 patients. A 50-bed hospital should have at least three interns, and four will be much better, especially if the interns are required to help with the routine laboratory work, the x-ray work, and the giving of anesthetics.

If a visiting staff is lackadaisical and indifferent, it is certain that the intern staff and the intern work will be inefficient. In other words, the character of the intern service of the hospital will be a reflection of the visiting staff, and we have indicated this by leaving a marking of only 5 percent for the interns as against 20 percent for the visiting staff.

The Nursing Service.—Tentatively and rather against Miss Wheeler's wishes, we are continuing to treat the nursing service as a part of the medical work of the hospital and to count the nursing staff as a part of the medical staff. Just here we might add that it is the intention of the collaborators in this series to go along discussing these various classes of hospital and the features of their standardization, accumulating information and building up a constructive fabric, calling upon those in active hospital work to help out as their own several classes of hospitals are reached, so that at the end we may have a fund available, out of which to set up a pretty satisfactory structure.

Whatever may be the conditions of the nursing service in many classes of our hospitals, we are upon pretty firm ground in discussing the nursing in these 50- to 100-bed semipublic or community hospitals. Since these are general hospitals with well-rounded service in most departments, all these hospitals can maintain training schools and should do so, and those hospitals that are of the right sort, with visiting medical staffs of the right kind, ought to have no difficulty in securing material for their training schools, usually from the clientele and patrons of the doctors. It is certain that parents would rather have their daughters complete their schooling and add to their accomplishments a profession which may become the basis of valuable careers, than have them go away from home into an environment not always of the best, and where they may be surrounded by an uncongenial, unaccustomed, and not very attractive atmosphere. Not always are these hospitals able to secure college women for their training schools, but almost always they will be able to secure young women of good breeding and good, wholesome home training, and, while this kind of material may not be the best out of which to mold training-school teachers, it is certainly excellent material out of which to make nurses who are actually to nurse.

In many of these hospitals the superintendent of the institution is also principal of the training school. In some cases her assistant acts as principal of the training school; in a good many of them the principal of the training school is an entirely separate entity and has practical charge of the care of patients, directly under the doctors. But these are minor matters and the personal element settles them in most cases. It is not quite so important whether the principal of the training school is answerable to the superintendent or to a training-school committee of the board of trustees as it is that she should know how to conduct her school and how to train her pupils to take care of patients and in the theoretical or book part of her professional service. It is quite essential that she shall know how to handle young women and to handle her own graduate assistants, and whatever graduate nurses it may be necessary to call in for special or private work. All this means discipline of a training school.

The reason that in some cases the superintendent retains the position of principal of the training school and puts in her own assistant as acting principal is that the superintendent feels that in that way she can center the responsibility in herself and thus be enabled all the better to maintain discipline and prescribe the necessary team-work with other branches of the institution. This item of team-work is a very important one; without it the doctors will be handicapped in their care of their patients, the administrative departments of the hospital will be greatly hampered in their efforts at efficiency and economy, and altogether the hospital will be ineffective and not of that same value in the community that it ought to be.

How many nurses shall these hospitals have? Our wisest leaders in the nursing profession think there ought to be as many as one nurse to every two patients. Others, again, give excellent reasons why one nurse to every three patients is sufficient; but it may be added, as a flat proposition, that the more nurses there are, other things being equal, the better will the patients be served. Of course, there are exceptions—cases in which the nurses are not properly disciplined or are actually in each other's way. One who is attempting to mark a hospital under this scheme of standardization should differentiate between an effective, efficient, energetic, well-disciplined training school, and one that merely has a lot of young women, unorganized and working in a haphazard sort of way and often at cross purposes with each other.

We are thinking now about acute-disease hospitals, with most of the general services and with only the normal number of convalescents and ambulatory patients that an acute-disease hospital would have. Our nursing requirements must be predicated on these conditions, and we must assume also that there are a sufficient number of domestics and orderlies to relieve the pupil as well as the graduate nurses of all menial occupations, because it is no part of a pupil nurse's business to scrub the floors or clean the rooms.

One other point: we occasionally find pupil nurses doing all the "special" service in the hospital, and sometimes we even find probationers and first-year pupils assigned to private cases in private rooms, even where the patients are extremely sick and require what we might call technical nursing. A hospital that does this sort of thing should be marked down very low. Of course, the reason it is done is to bring in that extra income to the institution. The hospital charges $15 or $20 per week for "special nursing," pays the pupil nothing, and the hospital pockets the money. It is a fine training for an advanced pupil nurse to get private case work, and in a good hospital the private nursing of senior or even intermediate class pupils is to be desired over that of graduates, because often graduates brought into a hospital happen not to be well trained or to have been out of training for so long that many new methods have been instituted since their time. These graduate nurses resent the interference of training-school heads, whereas, in the case of an intermediate or senior pupil nurse, the work is done under trained direction and under the discipline of the institution. It is wrong to put a probationer or a first-year student away off to herself with the responsibility of the care of any patient, private or free, and where this is done the training school should be given a very low mark.

All too frequently the curriculum in these community hospitals is about the only thing in the nurse training except hard bedside work that the pupil gets; in other words, there is a curriculum, but it is not carried out, and even when an attempt is made to live up to it it is futile and inefficient because medical staff members and interns who are unable to teach form the faculty and their instruction is often too poor to be dignified as teaching. A curriculum does not make a training-school course; it is what is done under that curriculum.

The living conditions of pupil nurses constitute a very important factor in the training school. If the pupils are huddled together in dormitories and have no individual privacy the morale will be bad, and unless they have the common living arrangements usual for young women in their class of society they will miss very much of the atmosphere that they will find when they go out into private nursing practice and they will have become unaccustomed to the influence and the ways of patients with whom they come in contact and will not give a good nursing service; if they are not taught home economics, cooking, and the hospital dietary they will also fall short when they go out into practice and will not be able to see that the orders of the physicians are properly carried out.

All these items should be taken into account in any attempt to standardize the training school in this class of hospitals.

LABORATORIES

We cannot expect the same elaboration in the laboratory arrangements of a 50- to 100-bed hospital that we would have a right to expect in those of larger size and broader service; but we have a right to expect that any hospital which has its doors open as a place in which to care for the sick shall be able to perform the necessary laboratory work to give the physician help in diagnosis and

treatment, according to the demands of modern medicine. It is assumed that there are good chemical reagents, that there are properly devised and properly working incubators, refrigerators gauged to preserve antitoxins and serums, that the hospital shall be able, in some way, to make autogenous vaccines and to administer these properly. We should expect that blood pressures, Widal tests and tuberculin tests can be made, that spinal puncture can be done, that an antimeningitis serum can be administered when required, and by someone properly trained to do the work. In pathology, such a hospital ought to be able to make tissue diagnosis, in at least the plain and obvious cases; there will usually be time for tissues and solids to be sent away for confirmatory diagnosis in the obscure cases.

There should be proper direction of the laboratories; that is, there should be someone as director who is qualified to do the work above outlined and who is likewise qualified to supervise the routine work that may be done by interns and associate members of the medical staff. It may be necessary to accept part-time service of such a man, and if the director be qualified it will not do to demerit the hospital because he does not give all his time to the institution. Such a director would require a considerable salary for his whole time, usually in excess of what a hospital in this class could afford to pay, but almost everywhere in this country today the part-time service of such a man is available, in any event, in localities that can support and use a hospital of this size.

The laboratory department of the hospital should be conducted under some well-planned scheme of organization. There should be definite technic for the work in all its branches, methods for collecting specimens through the hospital and for sending them to the laboratory with proper checks attached, and carbons should be used in order that the laboratory may keep a permanent account of the work it does and that there may be copies of all reports for filing with the records of individual cases.

The laboratories should permeate every part of the hospital with their scientific atmosphere, and there should be ample evidence in all parts of the institution, especially in the medical staff, that the laboratories are a definite influence and are actually employed in the diagnosis and treatment of patients. Where such an atmosphere is present some research work will be done and interesting cases will be prepared for publication and issued from the hospital in some published form. All these things should be taken into account in the marking of the hospital.

THE X-RAY DEPARTMENT

For the benefit of trustees and those supporters of the hospital who are interested to know that their institution is properly equipped and has proper facilities for doing modern medical and surgical work, the following list of x-ray equipment is given, with the suggestion that there are in nearly every community men and women of means who, if properly approached, will be willing to make up the deficiencies in this department by contributing the necessary funds. There is really no excuse for any hospital in this class not having adequate facilities and equipment, not only to make pictures of the long bones, but also to make plates of soft tissues, do good fluoroscopic work, and provide adequate treatment in keeping with the demands of modern therapy.

1 Model C transformer, 220-volt, 60-cycle, A. C	$ 600.00
1 No. 1 radiographic stereoscopic table	230.00
1 auxiliary tunnel and 2 plate changes	25.00
1 cord reel post and 3 cord reels for horizontal fluoroscopy	17.25
1 No. 3 radiographic stereoscopic and fluoroscopic stand	215.00
1 No. 3 fluoroscopic arm, with counterweights	22.00
1 No. 3 fluoroscopic adjustable diaphragm shutter	25.00
1 10 by 12 fluoroscopic screen mounted in protection frame	57.50
1 foot switch	27.00
1 stereoscope	98.50
1 x-ray plate chest	16.00
1 11 by 14 intensifying screen and metal cassette	47.00
1 lead rubber protection apron	12.00
1 lead rubber protection gloves	12.00
1 x-ray tube hanger, 5 tubes	4.50
1 tube hood cloth (for excluding tube light in fluoroscopic work)	3.75
1 x-ray protection screen	39.00
	$1,451.50

COOLIDGE TUBE EQUIPMENT

1 Coolidge tube transformer	$ 35.00
1 Coolidge tube regulator	35.00
1 Coolidge tube meter	35.00
1 Coolidge No. 6 stand for regulator	11.50
1 Coolidge insulated shelf for transformer	3.50
1 fine focus Coolidge tube	125.00
1 broad focus Coolidge tube	125.00
1 medium focus hydrogen tube	75.00
1 Coolidge cathode terminal	1.25
	$446.25

OVERHEAD CONTROL SYSTEM

1 set wall insulators, 4-arm	$13.00
200 feet trolley cord wire	6.00
2 trolley cord reels	6.50
2 Coolidge trolley cord reels	8.50
	$34.00

DARK-ROOM OUTFIT FOR OUTFIT NO. 2

3 8 by 10 developing trays	$ 3.75
3 11 by 14 developing trays	7.50
3 15 by 17 developing trays	12.00
1 ruby light	6.75
1 dark-room apron	1.00
1 16-ounce graduate	.50
1 drying rack	1.25
1 midget shadow box	6.00
1 interval timer	3.25
2 32-ounce glass-stoppered bottles	1.50
24 packages developer	6.00
25 pounds C. P. hypo	1.50
	$51.00

Plates, films, as selected.

Total of equipment absolutely necessary for operation	$1,531.75
Total of complete equipment	1,982.75

This includes equipment that greatly assists in operation of the outfit, but can be dispensed with at first and added later when desired.

THE DIETARY DEPARTMENT

There is an immense amount of nonsense practiced in the smaller hospitals of the country in the dietary department. "Diet lists," the efficacy of which has been disproved for years, are still in use, and in many of these hospitals each visiting physician has his own favorite lists, mostly predicated on principles that are no longer recognized

by physiological chemists and food physiologists. Frequently these lists are so sacred as to be veritable fetishes in the institution. Modern physiology, in the light of the present knowledge of metabolism and its laws, declares that each case is a special study in itself and should be treated without reference to printed or published lists. No two individuals respond in the same way to any course of special feeding, and modern clinicians recognize today that they must study their cases with the aid of the laboratories, and change their diets, articles of food, and amounts and frequency of feeding in step with the response of the patient. This means that the dietetic department of even a small hospital is one of the scientific agencies for the treatment of patients, and a cook, however efficient in the preparation and service of ordinary foods he or she may be, is wholly inefficient to conduct the department of special feeding, even in the class of hospitals that we now have under discussion.

Four or five years ago there were only a few trained dietitians in the country, and one might count on the fingers of one hand the women in the United States who could be consulted by clinicians with the hope that some effective therapeutic methods of treatment might result; today there are many of these women, and the number is growing rapidly. A few well-chosen leaders are inspiring the rest, and the time is almost here when every hospital in this class may be expected to have in its employ a trained dietitian who would be in reality a part of the medical service of the institution.

There should be system in the dietary department. Forms should be used in every case that requires special feeding, and the proper use of these forms should keep the clinician definitely informed as to what his patient is actually getting, when, how much, and its chemical constituents. These charts, properly kept and taken in comparison with the laboratory findings from time to time, ought to give the clinicians a check on their work that would render their treatment most profitable to the patient. Unless such records are used and used in a routine way, the hospital should be marked down. And, even though there be a good dietary department, if the physicians practicing in the hospital do not make proper use of it, then the institution should be marked down for that department and kept down until the physicians recognize the demands of modern medicine in their hospital practice.

PHARMACY

There should be no substitutions of "something just as good" by the pharmacy in any hospital. When a doctor prescribes a medicine that is too expensive for the institution to pay, the same arrangement should be made for its purchase in each individual case. A doctor who insists upon the routine prescribing of expensive medicines may be reasoned with, but substitutes are not permissible under any circumstances.

Nor is it permissible to keep medicines in a hospital in the wholesale way of a former day, using numbers for various routine prescriptions. We are not employing "shotgun prescriptions" any longer, and, as a rule, doctors are using the simplest forms of prescription, giving only the medicines that are actually called for; ergo, honesty in the pharmacy is one of the first requisites.

As an economy proposition the pharmacist ought to be well informed as to the source, processes of manufacture, and the standardized strength of various pharmaceuticals; whether he shall make his fluidextracts and tinctures is not quite so important, but if he does make them they should be made out of carefully selected herbs and original sources, with some check on strength and efficiency.

The modern pharmacy is not as important as it was a while ago, and its place in the cure and care of patients is becoming less important as time goes on and our knowledge of the cause, course, and cure of disease increases.

There should be an economical side to the pharmacy; large quantities of drugs should be bought with a view to their economical use. Flaxseed meal can easily deteriorate, but it is expensive to buy in small quantities, so there is a happy medium; chloroform, ether, alcohol, glycerin, and many other officinal drugs should be bought and stored with a view to their keeping qualities as well as to the economy in first cost.

Above all else, there should be a definite technic as to the distribution of drugs to the wards and hospital units, and it is equally important that medicine cabinets on the floors should be so arranged that economy and efficiency can be practiced. In many of these smaller hospitals there is no system about the keeping of ward medicine cabinets, and it has happened that half a dozen bottles of precisely the same drug are in stock and a new bottle ordered whenever that drug is prescribed. This is due to the fact that the cabinets are stuck away in some dark place and so arranged that bottles stand in front of each other where nurses cannot see them.

In some hospitals, also, probationers and first-year nurses are given charge of the medicine cases, which is a pernicious practice, with the result of constantly recurring stories in the news-

papers about some patient dying because the wrong medicine was given.

A failure to recognize all these essentials in the pharmacy department of this class of hospitals should cause a low mark in any attempt at standardization.

DISPENSARY, OUT-PATIENT DEPARTMENT, AND SOCIAL SERVICE

Mr. Davis feels that the social service department is something entirely different from the dispensary and out-patient service; and it is only for the purpose of tentative discussion we still retain this relationship in considering these departments together.

There can be no hard-and-fast rule about the size or elaborateness of service in the out-patient and dispensary departments of the class of hospitals we are now discussing. Almost everything will depend on conditions in individual cases. If there are few poor people in the community and little need of charity service, the dispensary and out-patient department can be correspondingly small. But in every community there are the people of most modest means who would not accept charity and who yet cannot afford to pay for the private services of a physician over a long period of convalescence or treatment. It is becoming rather a frequent practice in hospital service to permit attending physicians to bring this class of patients into an out-patient department of the hospital, where they may be given adequate attention at a lower cost than would be possible in the physician's private office. These so-called pay clinics seem to be acceptable, and the hospital is not to be marked down because of such dispensary service.

Nor is it outside the legitimate service of a hospital to have patients, especially surgical patients, returned to an out-patient department for convalescent dressings; indeed, this is the most economical and satisfactory way, in many of these cases, to continue treatment without interfering with the regular hospital activities. If there be an out-patient department, it should be adequately conducted, and it is not sufficient merely to accept patients in this department, treat them, and let them go their way without any check upon their future movements. In a great many hospitals minor operations will be performed, dressings put on, and patients allowed to depart and left to their own devices as to whether they return or not. Much harm has come out of this slipshod practice. It is absolutely necessary, if an out-patient department is to be maintained, that there be some follow-up system, some visiting and home nursing done, and a failure to do this is to be condemned.

Nor is it sufficient that there be an examination in the out-patient department and an order given for medicine without some serious attempt to make an accurate diagnosis and the prescribing of adequate and promising treatment. This means that there must be available for the service of the out-patient department an x-ray service and a clinical laboratory capable of doing any kind of work that might possibly be called for even in the hospital itself. Often autogenous vaccines can be utilized to advantage for out-patients, and certainly it is frequently necessary to identify microorganisms associated with disease, and an out-patient is quite as much entitled to this efficient service as the patient in bed in the hospital. In other words, the old days of the hit-or-miss dispensary practice are gone, and when a hospital decides to maintain an out-patient service it obligates itself by inference to do the work efficiently and in step with the demands of modern medicine.

It is believed that these hints will enable a surveyor to mark this department of this class of hospitals in a helpful way.

MEDICAL RECORDS AND ACCOUNTING

As we have intimated in discussing other classes, record-keeping and accounting in the modern hospital are indissolubly related, and both items are in such process of evolution at the present time that no hard-and-fast rules can be laid down by which the system of one hospital may be condemned and that of another accepted. But there are some fundamental principles at issue which can be taken into account and upon which a hospital may be tentatively marked until such time as we have arrived at some definite standards of accounting and some definite standards of record-keeping.

Any system of hospital accounting must be simple and yet capable of furnishing information as to what the institution is doing, how, and at what expense. In any system of accounting the superintendent should be able to ascertain at a moment's notice just precisely what each department of his institution is doing, with details as to income and expenditure. There must be in even the simplest system a detailed account kept on both sides of the ledger of every department and of every service; for instance, it is not sufficient that we keep a food account, and let it go at that. We must also keep, for instance, a meat account; not only a meat account, but a pork account and a beef account, and so on down the line. These accounts should be so kept that at any time the superintendent may call for any detail and have it.

Special departmental account should be in sufficient detail so that the superintendent may have

the information at any moment as to whether the department is making or losing money, and if so, how much. He will obviously be in position to evaluate the services of the departments aside from the wholly financial transactions.

As yet there are no standardized methods by which the per capita cost of the institution is to be arrived at; this is one of the fundamental weaknesses in our present chaotic hospital accounting systems. Some hospitals, by their bookkeeping, count every expense before doing the arithmetic to arrive at the per capita distribution of costs, and these hospitals have a high per capita cost. Other institutions soothe themselves into a happy frame of mind about their per capita costs by ignoring many items of everyday expenditure and do not count them when figuring on the per capita; these hospitals show a very low per capita cost, and by those who are uninformed get credit for a wise and judicious administration, when precisely the reverse may be true. The first decisive step in the standardization of hospital accounting is to come in the form of an agreement among the hospital people as to just what shall be included in making up the per capita cost, and obviously the answer is to count every conceivable expense, direct and indirect; when that day comes we shall have some figures for comparison that will do more for the efficiency of hospitals than any other one thing.

In the record-keeping there are two sides just as there are in accounting; one of these sides, and obviously the more important, is that concerned in the history of patients, their histories leading up to the diseases for which they are in the hospital, and the stories of their cases in the hospital itself. The other side has to do with the financial transactions with patients, and this feature is intimately interwoven with the bookkeeping and financial accounting of the hospital; it concerns the distribution of patients into wards and rooms and the amount they pay in special charges that may be assessed against them. It may be urged here, as we have urged so many times, that hospital administration will be far easier, the relations between institutions and their patients will be pleasanter, and the care of patients will be more efficient, when we have discarded special charges of all sorts in the hospital and fixed a flat hospital rate per bed or per ward or per room for patients, assuming that once a patient is in bed in the hospital he shall have, under the terms of his admission anything that his doctor may order in his interest.

In marking a hospital, in the department of accounting and record-keeping, the amount of information available and the promptness with which it may be had are the two primary considerations. A bookkeeping system that requires a master bookkeeper to interpret is useless to the average hospital superintendent; a record of a patient, which, not being complete and conclusive, will not be of use in the summing up of medical literature of the institution, is also worthless. A record-keeping system that is theoretically good and wholly bad in its practical working is worse than none at all, and there is really no excuse for a hospital not keeping good medical records.

These things should give considerable help in the efforts of a surveyor to mark a hospital in these respects.

ARCHITECTURE, INCLUDING PERMANENT INSTALLATION, SUCH AS PLUMBING, STEAMFITTING, POWER PLANT, ELEVATORS, VENTILATION, VACUUM CLEANING, LAUNDRY, SEWAGE, AND GARBAGE DISPOSAL

We have allowed only 5 percent as the maximum for this department; it seems a very small percentage, but, if we think in terms of the care of patients, which is almost wholly a matter of personnel and very little a matter of architectural environment, we think 5 percent is sufficient. We would give only 1 percent of this to the floor planning of the hospital and nothing at all to the exterior and ornamentation because these have so little to do with the patient's care and cure. If the hospital is planned so that the arrangements for nursing patients are economical we should consider a good mark. The vast majority of hospitals are planned without any reference whatever to economy and efficiency in the care of patients, and contemplate only appearances, as viewed by the layman and by the architect who has no conception of hospital needs and methods. For the plan of the hospital as a whole and for the plan of the various administrative units, such as operating suite, kitchens, laundry, etc., we should allow 3 percent as the maximum. For materials used in the building and in the permanent installation we should allow 2 percent. By materials we mean the class of plumbing and plumbing fixtures, steam piping, the class of flooring, material out of which walls and windows and doors are built. We should allow 1 percent for the execution of details. Most architects are extremely careless about the details of construction. Turned cove bases often seem to be an afterthought and are put in frequently without very much reference to their relation to the walls and to floors; plinths, plinth blocks and thresholds seem often to be almost foreign bodies, stuck in at the last moment; the location of lights and lighting fixtures is too often at cross-purposes with the needs of nursing and the doctors. Often

there seems to be no system whatever about the location of lavatories and toilets; frequently we will see a toilet and lavatory for a private room built next to the corridor and without means of adequate ventilation. The piping for lavatories and toilets and for the steam heating is frequently done without any reference to a system of any kind; even after our costly experiences of recent years we find architects running on the horizontal with a lavatory drain clear across and imbedded in the concrete or under the concrete. All hospital plumbing should be devised by a system, and that system should contemplate definite areas of risers so that drains may be on the vertical and easily got at when necessary. The fetish of open plumbing run along walls is happily at an end, and we have substituted vertical risers with outlets adjacent. There may be many of these risers to accommodate a possible unsystematic arrangement of lavatories and toilets, but at any rate they can be laid out on a definite principle, and in all cases horizontal runs should be avoided.

EQUIPMENT, MEDICAL, SURGICAL, AND PHYSICAL

Of course, medical and surgical equipment is absolutely necessary to the performance of the functions of a modern hospital; it makes very little difference what the architecture of an operating suite is, its form or size, but it means everything whether its furniture and furnishings are adequate for the performance of surgical operations of all kinds. It makes every difference whether there is adequate sterilizing apparatus of the various sorts and whether that apparatus is efficient and in good order. The character of the operating tables is important and the facilities for the operations in the various surgical specialties are quite as much so. For instance, head lamps of approved pattern are necessary in brain surgery and in the deep pelvis. Efficient and conveniently arranged cautery apparatus and machinery for the various trephines and drilling operations through bony structure; hoists for putting on casts, extension apparatus for hip and thigh fractures. A hospital that has not these facilities and conveniences should be marked low. We have provided a total of 5 percent under this heading and we should allow 2 percent for what we have just outlined; and 2 percent should be allowed for surgical instruments, made-up boxes for special operations, such as venesection, spinal puncture, the preparation of the dead, etc.; and 1 percent may be allowed for the physical furniture of the hospital; that is, for beds, springs, mattresses, dressers, tables, chairs, floor covering, window shades and dressings, and the other essentials to a well-furnished hospital. It is not sufficient, for instance, that there be plenty of chairs; there must also be chairs for special purposes. Straight chairs in abundance are necessary, rockers for those who need them, Morris chairs for other classes of sitting-up patients, wheel chairs of convenient design and in good order; commodes are necessary under certain conditions and ought to be part of the furnishing of each unit.

The furnishing of the nurses' home must be included at this place. It is essential that nurses have comfortable beds and that these be kept in good order as to their springs and mattresses; it is also necessary that the home shall have adequate and properly designed tables in the nurses' rooms. The home in most hospitals is provided with a table in each room—one table for two or three nurses—and this table is usually occupied by toilet articles and books so that nurses could not make use of their table in writing or studying if they were so disposed. The rooms of the nurses should be furnished with the sort of table that hotels use, flat on top but with a secretarial drawer that pulls out, having compartments with pen, ink, paper, and a place upon which to write. There should be a shelf under the table to contain books that are not in constant use, so that the top of the table may be left for those things that are in constant use, including books.

A hospital furnished with upholstered chairs and lounges and with thick velvet carpets in patients' rooms should be marked very low down because these things are dirt-catchers and germ-gatherers and cannot possibly be cleaned effectively for each new patient.

MANAGEMENT OF THE HOSPITAL

The most important item in the management of a hospital is the superintendent, and we may easily allow 2 percent for this item. Next in importance comes the scheme of organization under the superintendent—the system by which responsibility is fixed. While the superintendent should be responsible to the board of trustees for the management in every detail, the organization should contemplate responsibility to the superintendent of all heads of departments, and for this scheme of organization allow 1 percent.

Cleanliness and order in the hospital, including training and discipline of the help, should be given a maximum of 1 percent, and the organization for handling the public, the staff, the patients, employees, and the tradespeople should have a maximum of 1 percent. Very few hospitals, even the best, are arranged for the courteous and prompt handling of outsiders. Arrangements by which the doctors can be accommodated and served while in the hospital are usually negligible; it is rare

that a doctor can be given adequate telephone service in the hospital, and in very few hospitals are there conveniences for him to see privately a prospective patient of the hospital or someone with whom he wishes to confer. Employees are regarded as a necessary evil in most hospitals. There is usually no place for them to assemble except possibly the dining room, no place where they can lay away their personal belongings, including clothing, with security, and their comfort is not a consideration. The position of the house help necessary to be kept on the premises hardly ever rises to the dignity of a hospital vocation. All these things, however, are necessary and add very greatly to the service of the hospital to its public, and often the efficiency in these several regards marks the difference between a popular and an unpopular hospital in the community.

ADDITIONAL COMMENTS ON THE SCHEME OF CLASSIFICATION

FROM REV. GEORGE F. CLOVER, SUPERINTENDENT OF ST. LUKE'S HOSPITAL, NEW YORK

I have just read with much edification and interest the article in the August number of THE MODERN HOSPITAL on standardization of hospitals. To my mind your scheme of markings for the university or teaching hospital will apply equally to the large high-class voluntary or semipublic hospital. St. Luke's is a quasi-teaching hospital, although not controlled by or closely affiliated with a medical school or university, inasmuch as we receive, by gentlemen's agreement, medical students assigned to us by Columbia University.

The hospital fulfills the standards as specified in your article in every respect, except possibly that of the dietary department. From experience I am unable to concur in your opinion that the dietitian should have the entire charge of the culinary departments. As dietitians are now trained it is to my mind better that their work should be confined to teaching nurses, the preparation of special diets, and the serving of food to patients. They have not yet been sufficiently taught along the lines of general cooking, housekeeping, and the management of servants to render practicable the government by them of the entire culinary department. Chefs and high-class domestic cooks as yet know more about the economical and appetizing preparation of food and the control of cooks and kitchen helpers than dietitians. I write emphatically on this question after many experiments in the other direction and with nearly twenty-five years' experience.

DR. THOMAS HOWELL, SUPERINTENDENT OF NEW YORK HOSPITAL

I am afraid that I have no constructive criticism to offer. It appears to me that your markings are very fair. The only thing which occurs to me is that 5 points for management is rather low when compared, for instance, with 10 points on medical records and accounting and 5 for pharmacy. A good dietetic department is useful, but I do not think it is as essential as the administration department, yet both are given the same marking.

I think possibly you could do more absolute justice to the various departments if the ratings were not confined to 5 and its multiples.

DR. HAROLD C. GOODWIN, SUPERINTENDENT OF ALBANY HOSPITAL, ALBANY, N. Y.

After reading your article entitled "Standardization of Hospitals—The University or Teaching Hospital," I am convinced that the standards for teaching hospitals which you insist upon are none too high.

In the first place, there is no reason why the organization of all typical teaching hospitals should not be the same, but in this country today we find many types of organization, some of which must be very unsatisfactory. After reading the article written by you and your collaborators, I am convinced that we are practically of the same mind regarding organization and internal work of teaching hospitals. So far as I know, the most typical exponent of a teaching hospital and most modern to date is Johns Hopkins Hospital of Baltimore. If some such hospital could be used for a standard with which to compare others, it seems to me that it might save some difficulties attending standardization, for there are so many varieties of institutions in this country.

MR. T. J. VAN DER BENT, OF McKIM, MEAD & WHITE, NEW YORK

I was very pleasantly surprised to notice in THE MODERN HOSPITAL that the matter of standardization of hospitals has at last seriously been taken up. That it has been taken up by yourself certainly gives it great promise to all interested in this very particular subject.

Without wanting to appear in print, which would take too much time in preparing "proper" papers, I wish to ask if you would, at an opportune moment, kindly have a number of matters settled—call it standardized—between the different authorities.

The subjects which need standardization and on which there is so much doubt, and so many different opinions exist that it is impossible to compromise between them, and which have troubled me and are continually troubling me, are as follows:

1. Standard minimum width of a ward—a, adults; b, children.
2. Standard minimum height—a, without forced ventilation; b, with forced ventilation.
3. The minimum and maximum distance of the bed from the wall.
4. The minimum distance between the two rows of beds in the wards—a, adults; b, children.
5. The desirable maximum of the number of beds in wards—a, general hospital adults; b, general hospital children; c, contagious diseases, adults; d, contagious diseases, children; e, baby hospital.
6. The desirable (maximum distance which nurse should walk) length of ward which should not be exceeded.
7. The most desirable location of the nurses' utility.
8. The most desirable location for patients' lavatories, patients' toilets, and patients' baths.
9. Is a passage at the side of patients' lavatories and nurses' utilities parallel with the corridor an advantage, a disadvantage, or extravagant?
10. The most desirable location for diet room, day room, and linen room.
11. In how far do balconies injure the ward in relation to light, air currents, and cross-ventilation, and what changes should be made in the dimensions of the wards to offset the injury or to overcome the disadvantages, if any?
12. Which is absolutely the better arrangement in reference to placing the beds—to have a window on each side of a bed or two beds between two intervening windows?
13. Is there such a matter as too much light to be considered? Yes or no.
14. Balconies which are at times nearly completely inclosed must considerably affect the ventilation of the ward. They must also have an influence on the width of the ward and the height. Has a decision been reached in any way as to what should be done in order not to have bad results

from the use of balconies? (Nos. 11 and 14 are practically the same subject.)

15. Data are needed as to the average percentage of up-patients—a, in surgical wards; b, in medical wards.

16. Desirable minimum distance of two parallel wards.

This seems quite a long list to hand out to you, but in reality I consider these questions the most important, and deciding the entire ward service. How important they are! I wish to tell you that during seven years of constant questioning of people who should be able to give an answer, for instance, as to Question 3, the nurses invariably give answers which differ as much as 2 feet 6 inches, and in answer to No. 4 a difference between dimensions amounting to 4 feet. I am perfectly willing to set a positive minimum and maximum to all dimensions of the foregoing list, and, if necessary, defend them against all doctors and nurses. There is, however, no reason why there should be a difference of opinion.

The distance of the bed from the wall is not guided by anything but the possibility of cleaning behind it without disturbing the patient, and this certainly does not need very much more than 6 inches. However, if the beds are placed without reference to the windows, they should be at least 2 feet 6 inches, and preferably 3 feet, from the wall, as otherwise they would come too close to the windows. These two cases are the only possibilities.

As for the distance between the rows of beds in different hospitals, I would say 6 feet is a minimum for children, and in adult hospitals, 8 feet. I cannot possibly see the necessity for 12 feet between the rows of beds.

Where there is no longer any question as to what is really desirable in the matters mentioned, other subjects in hospital building would receive closer attention.

Of course, I do not expect to receive an answer to any of the above subjects until you have reached them in proper order.

REORGANIZATION OF THE CIVILIAN HOSPITAL ON A WAR BASIS*

War Department Does Not Expect Civil Hospitals to Care for Wounded Soldiers and Sailors—Their Duty to Release Scientific Staffs for War, and to Care for Civilian Population—Orders Relating to Interns and Nurses

By WINFORD H. SMITH, Major, M. R. C., Director General of Military Relief, American Red Cross, Representing the Surgeon-General of the Army

THE title on the program upon which I am supposed to address you was not of my selection, and, in fact, I do not know who did select it. I shall not confine myself to the title in these brief remarks, but shall touch upon several phases of the development of the Medical Reserve Corps of the Army, and the effect upon the civil hospitals; the part which the hospitals have played and must continue to play; and the attitude of the Surgeon-General's Office toward the civil hospitals.

It is well recognized that many hospitals have been embarrassed by the withdrawal of a large proportion of their staffs, both visiting and resident. I wish you to understand, however, that the Surgeon-General of the army and his staff have from the first recognized the need of protecting the civil hospitals, medical schools, and the public, and every effort which could be made toward that end has been made. Mistakes have been made and repeated, but you must bear in mind that the task which the Surgeon-General's office faced was the recruiting of a medical corps of at least 20,000 physicians and surgeons, and in war the needs of the army come first. However, early in the operations, the Surgeon-General's Office, with the assistance of the Council of National Defense, tried to take such steps as would safeguard the civil hospitals and medical schools. Instructions were sent to 700 hospitals, and all medical schools calling for a reorganization of their staffs on a war basis, with a view to releasing as many men as possible for service. It was requested that the staff be divided into those who could be spared and those who were needed to man the civil hospital or school, and to indicate those who were members of the Reserve Corps. Of those who could be spared, all who were not already members of the Reserve Corps were urged to join at once. The list of those who were needed to man the civil hospitals was at once scrutinized, and every man who was a member of the Reserve Corps was placed in a special inactive file. Mistakes occurred, and many of these men were ordered out, but in every such case the error was corrected whenever possible. The greatest difficulty arose from the fact that hundreds of those who, when the list was submitted were not members of the Reserve Corps, later applied and were commissioned and ordered on active duty. This was no fault of the Surgeon-General's Office. It was not expected that men who knew that they could not accept service because they were needed in the civil hospitals and schools, would apply for and accept commissions. When this difficulty arose, a letter was drafted and sent to the hospitals and schools, requesting that no man who was not in a position to accept service should apply for a commission. I wish to assure you that throughout every effort has been made to safeguard the interests of the civil hospitals and medical schools. You who are familiar with organization, must appreciate that when an organization which had been accustomed to handle a corps of about 500 was suddenly faced with the

* Read before the American Hospital Association at its nineteenth annual session, Cleveland, September 11-14, 1917.

necessity of expansion, in restricted quarters, to handle the recruiting of a corps of 20,000, and in addition to take on the formation of a dental corps and a veterinary corps, confusion and errors were bound to occur. Had it not been that the Surgeon-General had in charge of the personnel division trained men who had a proper appreciation of your problem, who had an inexhaustible supply of patience, and who were willing to work nights and Sundays, the confusion would have been worse and you would have suffered more.

After the reorganization was accomplished and the larger machine was running fairly smoothly, then the draft took place and students and interns were taken in large numbers. Early in the spring a committee of the Council of National Defense, cooperating with the Surgeon-General's Office, tried to provide in the draft bill for the exemption of physicians and medical students. For some reason this was not provided for, although the Surgeon-General favored it and the Secretary of War recognized that some such provision was necessary. For a brief time there has been great consternation at the thought that the hospital staffs were to be still further depleted and the supply of medical students cut down nearly, if not quite, one half. If something had not been done, it would have been a very grave situation and would have represented a grave blunder. But something has been done, and so far as possible the error has been corrected. It seems desirable at this time to call attention to the provisions for safeguarding the hospitals and conserving the supply of medical students.

ORDERS

War Department, Office of Surgeon-General,
September 4, 1917.

The following regulations governing the discharge of hospital interns and medical students from drafts under the selective-draft law of May 18, 1917, have been made by the President:

"First. Hospital interns who are graduates of well-recognized medical schools, or medical students in their fourth, third, or second year in any well-recognized medical school who have not been called by a local board may enlist in the Enlisted Reserve Corps provided for by section 55 of the national defense act under regulations to be issued by the Surgeon-General, and if they are thereafter called by a local board they may be discharged on proper claim presented on the ground that they are in the military service of the United States.

"Second. A hospital intern who is a graduate of a well-recognized medical school, or a medical student in his fourth, third, or second year in any well-recognized medical school, who has been called by a local board and physically examined and accepted and by or in behalf of whom no claim for exemption or discharge is pending, and who has not been ordered to military duty, may apply to the Surgeon-General of the Army to be ordered to report at once to a local board for military duty and thus be inducted into the military service of the United States, immediately thereupon to be discharged from the National Army for the purpose of enlisting in the Enlisted Reserve Corps of the Medical Department. With every such request must be inclosed a copy of the order of the local board calling him to report for physical examination (Form 013), affidavit evidence of the status of the applicant as a medical student or intern and an engagement to enlist in the Enlisted Reserve Corps of the Medical Department.

"Upon receipt of such application with the named inclosures the Surgeon-General will forward the case to the Adjutant-General with his recommendations. Thereupon the Adjutant-General may issue an order to such intern or medical student to report to his local board for military duty on a specified date, in person or by mail or telegraph, as seems most desirable. This order may issue regardless of the person's order of liability for military service. From and after the date so specified such person shall be in the military service of the United States. He shall not be sent by the local board to a mobilization camp, but shall remain awaiting the orders of the Adjutant-General of the Army. The Adjutant-General may forthwith issue an order discharging such person from the military service for the convenience of the Government.

"Three official copies of the discharge order should be sent at once by the Adjutant-General to the local board. Upon receipt of these orders the local board should enter the name of the man discharged on Form 164A and forward Form 164A, together with two of the certified copies of the order of discharge, to the mobilization camp to which it furnishes men. The authorities at the mobilization camp will make the necessary entries to complete Form 164A, and will thereupon give the local board credit on its net quota for one drafted man."

1. It will be observed that paragraph First of the foregoing deals with interns and students who shall not have been called by a local board, and provides that they may enlist in the Medical Enlisted Reserve Corps under regulations to be issued by the Surgeon-General, such enlistment entitling them to discharge from draft if thereafter called.

2. An application for enlistment under this paragraph must be forwarded to the Surgeon-General with the affidavit of the applicant, supported by the certificates of his school authorities, showing his present status as intern or student, and particularly how long he has been an intern in the one case, or the year of the medical course that he is pursuing in the other.

3. An intern who has served one year or more as such will not be enlisted in the Medical Enlisted Reserve Corps under this regulation.

4. An intern who is enlisted in the Medical Enlisted Reserve Corps hereunder will be called into active service under his enlistment, if his services are needed, at the end of one year of internship. Applications for commission in the Medical Reserve Corps, from interns who at the expiration of one year's internship are called for duty as members of the Medical Enlisted Reserve Corps, or from interns whose year of internship is about to expire, will receive proper consideration.

5. A medical student (undergraduate) who is enlisted in the Medical Enlisted Reserve Corps hereunder will be called into active service under his enlistment, if his services are needed, upon failing to pass from one class to another, or upon failing to graduate.

6. The Second paragraph above quoted deals with interns and students who shall have been called for service by a local board under the selective-draft law, and contemplates their discharge from the draft, upon condition that they shall enlist in the Medical Enlisted Reserve Corps.

7. It will be the policy of the Surgeon-General as a rule to recommend discharge from the draft upon the condition indicated, the discharge to be followed by a call to active duty under the enlistment in the Medical Enlisted Reserve Corps at the expiration of a complete year of internship or upon the failure of the student (undergraduate) to pass to the next higher class or to graduate.

8. Interns and students who are enlisted in the Medical Enlisted Reserve Corps by virtue of these regulations, and are not called into active service under such enlistments, are required to report their status to the Surgeon-General as follows: Interns, at the end of each three months' period, such report to show the total amount of internship since graduation, and to be countersigned and attested by the Medical Superintendent of the hospital; students, at the end of each semester, such reports to show whether the students qualified for advancement, and to be countersigned by the deans of their respective schools or by subordinate officers representing the deans.

9. In the execution of these regulations the Department will not recognize internships in hospitals, sanitariums, or other institutions conducted for profit, or in small private hospitals (50 beds or less), or new internships established or added since May 18, 1917, to those previously existing, at any hospital, excepting such as may have been newly established and added by reason of a proportional increase in the bed capacity of such hospital; nor will it recognize internships in the case of any graduate appointed thereto later than August 1 following his graduation.

By order of the Surgeon-General.

ROBERT E. NOBLE,
Lieutenant-Colonel, Medical Corps.

The above provisions with regard to the exemption of interns do not apply to internships which have been established since the war began, except in new hospitals which have been opened since that time, or in large institutions where new and legitimate services have been established.

(This last paragraph is not the official text, but represents the writer's understanding of the matter.)

It will be seen from the above that interns may be exempt for one year, and medical students for the remainder of their course, provided they pass from one class to another. This does not provide for the continuation of service in hospitals of a sufficient number of interns to provide for the longer service required of a limited number to carry on the resident system. Speaking as an individual, I think this is a pity, but I am sure that whatever can be done by the Surgeon-General will be done, in order to safeguard the resident system, which has so largely been adopted by the larger hospitals.

New internships, established since the war began, will not be recognized, except in new hospitals, or established hospitals of sufficient size to warrant such exception. I am sorry to say that evidences of evasion of the above provisions make it necessary for the Surgeon-General to have the deciding voice in regard to exceptions.

I think the provisions with regard to medical students are sufficiently clear.

Now, it is apparent that in spite of these provisions, hospitals will be obliged to modify their organizations, in many instances considerably.

In the first place we must recognize that we are at war, and on a scale previously not dreamed of. All institutions must modify their organizations to meet war conditions. Hospitals must do their work with smaller staffs. Some phases of hospital work can be sacrificed temporarily if necessary, without lowering the efficiency of the hospital so far as relates to the care of the sick. In many hospitals senior medical students can be used as interns; nurses can be used as anesthetists; in fact, every legitimate device may be necessary in order to keep our civil hospitals going and at the same time provide the necessary number of physicians to the army.

Another respect in which the hospitals will suffer will be from a shortage of trained nurses. When fifteen to twenty thousand trained nurses are called into service, as they will be if the war program is carried out, there will be a shortage of trained nurses. These will be largely recruited from among those who are doing private nursing, but a considerable number will be taken from hospitals. Now, it is just as essential to keep the training schools for nurses going as it is for the medical schools. Those holding teaching positions and important executive positions should be retained if possible, but many of the head nurses will go, and they can be spared. Senior pupils must be utilized to fill their places. Larger classes should be enrolled, so that if necessary in case of great emergency, a part at least of the senior classes could be graduated early and made available for military duty. Readjustment will have to be made in this respect, as in many others.

It may be of interest to know what steps have been taken to secure the requisite number of nurses. The Red Cross nurses from the Nursing Reserve for the Army Nurse Corps. Already about 13,000 are enrolled, and they are being enrolled at the rate of nearly 1,000 a month. The standards of the Red Cross require a nurse to be between the ages of 25 and 40, a registered nurse, graduated from a school connected with a hospital of at least 50 beds. The age requirement has been modified, if the report of a special committee of the Red Cross is adopted by the War Council, so that the lower age limit will be 21 and the upper age limit will be indefinite—that depending upon the individual's fitness. The 50-bed limit is recommended to be modified, so that a graduate of any school will be acceptable, provided that school is recommended by the state board of registration as giving a course sufficiently thorough for war purposes.

Then there is the question of the need of training nurses' assistants. The special committee appointed by the War Council to consider the nursing problem has recommended that, while it is not a pressing need at the moment, should it seem de-

sirable, a special course for the training of nurses' aids should be given, this course to cover a period of one month of 8 hours each day, and that these courses may be given in any school recommended by the State Boards of Registration, as qualified to give such a course. It is expected that this report of the committee referred to, will be adopted. The Nursing Bureau of the Red Cross will then give directions and regulations governing the course. For the moment, however, the pressing need is to enroll the required number of nurses for the army, and this is going forward satisfactorily.

These are some of the factors which enter into the reorganization of the civil hospitals on a war basis. What is the specific function of the civil hospital in the military scheme, and what must they do to prepare to serve the army? That is a question which I fancy many will ask, and which I take it was intended for discussion under the title assigned to me. The present plans of the Medical Department of the Army do not contemplate the use of civil hospitals to any great extent, except in the event of a great emergency. It must be apparent that the great need of hospitals for army purposes will be in France. Our line of communication is much too long to permit of sending wounded soldiers back to this country, except when it has been determined that they are no longer fit for military duty. Even then it is planned not to subject them to the long sea trip until they are sufficiently recovered to enable them to take the trip with the minimum of discomfort and suffering.

Such a plan, therefore, means that the most of those sent home will be already convalescent, but will need reconstruction and reeducation to fit them to return to lives of usefulness, so far as possible. Will the civil hospitals be used for the treatment of these men? So far as the army is concerned, that is not the plan. It is necessary to retain these men under military control in order to keep the military records complete and to protect the government in the matter of pensions. It is furthermore desirable in order to compel those men who require it, to undergo training and reeducation in order to fit them for lives of usefulness. The experience of England and France has been that after men have been in active service at the front and have suffered the rigors of modern warfare, unless they are kept under military control, there is a tendency for them to avoid this necessary reeducation, preferring to return home, at least for a period, after which many do not return. It is strictly in the interests of the soldier that it is planned to keep him under military control until he has been readjusted or reeducated, so that he will have a place in our industrial life and may be a useful citizen. The whole plan involves the question of reeducation, vocational schools, employment bureaus, adjustment of state compensations, and liability laws—in fact, the problem is so great as to be almost staggering. It will be at once apparent to you that if this problem of reeducation and employment of the physically handicapped is solved for the soldier, it will represent a great step forward as a permanent contribution to our civic system by solving the problem for the industrial cripple and the physically handicapped individual generally.

The present plan is to use the existing government hospitals and temporary hospitals constructed for the purpose, also such existing institutions as may be turned over to the Government entirely. It is also possible that large institutions which are able to place at the disposal of the Government a considerable number of beds, say 100 or 200, may be used, in which case that part of the hospital will be under military authority, either by assignment of a medical officer, or by contract with members of the regular staff, or both. Where a whole hospital is turned over, it will be operated strictly as a military hospital. Where a portion is turned over, if it is used, it will be by contract arrangement. The present plan, therefore, does not warrant hospitals in general in going to any great length in providing for soldiers, unless it is on the advice of the office of the Surgeon-General of the Army or Navy. It is, of course, quite possible that these plans may be modified, either from choice or from necessity, but at present it is not the plan to use civilian hospitals to any great extent, except in the event that the provisions made should prove to be inadequate.

What, then, should the civil hospital do to prepare for service during the war?

It should offer to the Government as many beds as possible, but they should be actual beds, readily available and in sufficient number to be worth consideration.

It should cut down the size of its staff to the minimum, in order to release as many physicians as possible for military service.

It should organize its intern service on a one-year basis, in order to comply with the regulations laid down.

It should prepare for the release of as many nurses as possible.

It should admit as large classes as possible and prepare, if the emergency should arise, to graduate at least a part of the senior class of nurses early.

It should be prepared to train nurses' aids whenever called upon to do so.

This is merely a sketchy review of the problem, the plans for its solution and their effect on the civil hospital. It is incomplete and hastily prepared, but I trust it may give an idea to some of what is being done and what is expected.

The question may be asked, "What about those members of hospital staffs who have had more than one year's intern service? Is there any provision for detaining those men for purposes of assistant residenceship?" There is no provision for this class of men. The provision for exemption applies only to interns, and internships are recognized for only one year.

"What is the status of interns already drafted, who have on that account joined the Reserve?" They are subject to exemption, if needed, to man civil hospitals, but only for a period of one year.

"Should interns and medical students who have not been drafted enlist now, or should they wait until drafted and then enlist?" There is no object in having these men enlist now. There is provision for them in case they are drafted, and if they enlist now, then their services cannot be retained after a period of one year. If they do not enlist now, and are not drafted, then these men will be available for longer hospital service until they are drafted.

In order to safeguard the hospitals, so far as possible, and to provide at least a minimum number of men with hospital experience, who may be available for the senior positions on the staffs, it is recommended that interns and medical students, who have not been drafted, should not enlist in the Enlisted Medical Reserve Corps at this time, as no particular purpose is to be served thereby, and there is a provision which will cover them in the future, provided they are drafted.

It is apparent that the hospitals which have established a residence system, or systems which provide an organization for a residence staff which includes men who have had more than a year's internship, will be obliged to reorganize on a basis of one year's internship, excepting such men of upper staff as are not caught in the draft.

The school nurse is not a passing experiment. She is a vital part of one of the most important of our national institutions. Through her work American citizens are physically fitted to receive the education which in its turn is to fit them for the responsibilities of citizenship. It is her duty to so teach the value of health both to children and parents as to make them realize that its attainment is worth some real sacrifice on their part; it is her duty to strengthen parental responsibility in new directions. It is her duty to strengthen the hands of teachers and physicians, and also to do her part toward making the American school an institution where bodies, as well as brains, are developed for a life of usefulness.—Mary S. Gardner, "Public Health Nursing."

SYPHILIS AND THE GENERAL HOSPITAL

Change in the Attitude of Hospitals Toward the Syphilitic —Closed Wards and Out-Patient Departments Preferable

It is estimated, says Dr. Henry Rockwell Varney in a recent number of the *Journal of the American Medical Association*, that from 15 to 25 percent of the patients admitted to all departments of the general hospital are syphilitic. In view of this percentage, based on Wassermann tests and clinical symptoms, the rejection of known syphilitics becomes absurd. It is gratifying to note that this narrow and short-sighted policy is much less prevalent than it was twenty-five or even ten years ago, and that increasing numbers of general hospitals are not only treating the syphilitic, but also educating him and the interns and nurses on this service as well.

The most successful hospital service for the syphilitic, in Dr. Varney's opinion, is the restricted general hospital with closed free wards and closed out-patient service. The medical service should be continuous; responsibility should be definitely placed on the chief of the service, with a carefully selected corps of assistants. Both interns and social service nurses should receive special instructions.

Record is made of all syphilitics who enter the restricted wards or out-patient departments. This registration supplies valuable data for the community and enables the hospital to follow up its cases; and the patient makes no objection to registration because the hospital records are private. Not only is the patient treated, but his family is examined and any members found infected are treated also. Under this closed system patients do not lose valuable time through the inattention due to shifting of responsibility entailed by rotation in service. Thus the confidence of the patient in his physician, which is of the utmost importance in this disease, is not impaired.

Save Soap and Time

"Good, pure soap and lots of it," is the motto in most laundries. This should be changed to "Good, pure soap and little of it."

One example of the inconsistency of the policy of using "lots of soap" is found in the statement of the head of one of the wash rooms in which quick, special work is turned out. He says, "I throw lots of soap in the wheel so as to get a big suds quick. I can't wait for a slow suds."

This man, in trying to save time, fills the linen with soap, which, in the succeeding rinsing process, he hasn't the time to remove. Good washing is 99 percent rinsing and 1 percent soap. The less soap you use, the easier it is to rinse. Soap is a hard rinser. If it remains in the fabric it will ruin the goods, and if you apply the only alternative of using acids to remove soap and shorten the time of rinsing, you also ruin the clothes.

Experience has proved that too much soap is at the bottom of the trouble—either through the soap remaining in the goods, or to the acid used in removing the soap. Too much rinsing also causes wear, although this is the least of the three evils. So what are you going to do?

The answer is washing soda—the double detergent. This removes soil and grime quickly—and rinses ten times more quickly than soap. Use only a light suds of soap. In other words, don't use enough soap to make suds. Use soap until you see the suds coming—and stop right there.

"Trouble knocked at the door, but, hearing a laugh within, hurried away."

THE CHEMISTRY OF MODERN WASHING

After Much Evolution Old Principles Are Back Again—Of Great Interest to Hospitals

BY ALLEN ROGERS, Committee Chairman Pratt Institute, Brooklyn.

Through the efforts of the Committee of the American Chemical Society, many points of general interest are being brought to the attention of the general public through the daily and technical press. It is a common saying that in time the most complex invention comes back in principle and even in form to the simple elemental type from which it was derived. Something of this kind of "reversion" has certainly taken place in the apparently simple process of getting things clean. These cleaning processes vary in character from the everyday washing of clothes to the washing of automobile rims before finishing; from the washing of wool as it comes from the back of the sheep to the washing of a man-of-war's deck.

In earlier times, when an article was to be cleansed, it was washed with the aid of soap, as a matter of course, and no thought was given as to why soap should be a cleansing agent. These early soaps were efficient cleansers, but in many cases were hard on the materials that were cleansed. Certain kinds of "dirt" were removed not by the soap, but by mechanical action, and often the cleaning was accomplished only by the wearing off of the contaminated surface of the article being cleaned. These earlier soaps were rather crudely made from mixed fats, and the homely processes used generally insured a large excess of free alkali. The early source of the alkali was principally wood ashes, which contained considerable amounts of potash. Later, about 1823, artificial alkali, which was in the form of caustic soda, began to be used in England. This soda alkali had the advantage of producing a hard soap and in many cases was not so destructive on the articles that were cleansed. Later, the fats used in the manufacture of the soap began to be selected; then soaps containing but very little excess alkali were produced, and it was found that these soaps did not have the cleansing power of the earlier soaps which contained the excessive alkali. It therefore became the custom to incorporate varying amounts of soda ash or other mild forms of alkali in soap, but time proved that in many cases these forms of alkali were still too strong.

As the population became more congested, there were developed commercial cleansing organizations which made a business of cleansing various articles for the public. With this development the people became more critical as to the efficiency of the cleansing operation and the attack on the goods cleansed. Naturally, therefore, attention was directed to securing efficient cleansing without destruction of goods. It was found that alkali had a distinct function in the operation and that in many cases the cleaning could be entirely effected by the alkali alone. In other cases it was found that the operation could be divided and that the use of the alkali in a separate operation gave increased efficiency and a lower cost. In these investigations it developed that the soap acted in a more or less mechanical manner and removed only such materials as could be washed away in a solid state or in an emulsion. It was found that some of the "dirt" was "set" in the goods and made more difficult to remove by the action of soap, but that if the goods were treated first with some form of alkali this material would be taken out.

It was found that various operations required soda of varying character, and that the soda alkalies were in most cases fully as efficient as potash alkalies and more economical to use. Hence the use of alkali in cleansing resolves itself almost universally into the use of soda in cleansing. In the cleansing of textiles, it was found that under ordinary working conditions the action of caustic soda or lye and soda ash was too harsh, and as a result of the milder forms of soda, such as borax, came to be used.

This, however, was expensive, and later there was developed another form commonly known as sesquicarbonate of soda, which was an efficient cleanser without unduly attacking the goods cleansed. On account of the difficulties of manufacture of the sesquicarbonate, many firms made up mixtures of soda ash and bicarbonate of soda approximating the composition of sesquicarbonate and possessing more or less of the properties of that compound. These materials have a very mild action and are especially adapted to all cleansing operations in which soda is suitable, in which the materials to be cleansed would be attacked by alkalies as strong as soda ash or in which the operator's hands come in contact with the cleansing solution, such as in the cleansing of containers and apparatus in dairies and creameries, and other food containers.

With the increase in the marketing of food products or beverages in bottles and the increase in size of the plants producing these materials, machines were developed for the automatic cleansing of the bottles used. It was found in this case that a strong form of soda was required to give efficient results, and for this purpose caustic sodas or mixtures of caustic soda and soda ash are generally used. It has been found that soda is applicable to many other cleansing operations in which it shows advantages in economy and efficiency of cleansing. Some of these domestic purposes are the cleansing of unfinished wood floors, tile floors, marble walls and fixtures, and the washing of dishes in hotels and restaurants, in dish-washing machines.

Thus it is seen that the cycle of change has led from the early soaps containing alkali by accident through the refined neutral soaps without free alkali, the soaps to which artificial alkali was added by design, and, finally, to the modern neutral soaps used in conjunction with special alkalies. We are back in principle to the earliest usage, but with this difference: we know now the function of the soap and the function of the alkali, and their use in one operation or in separate operations is as much a matter of science as, let us say, the building of a battleship.

Unquestioning obedience and conformity to rules are among the most important lessons learned by the pupil nurse during her hospital training, and make an indispensable foundation on which to build other desirable characteristics, but the superintendent who would have a really strong staff must not be content with a set of obedient children content to do her will, no matter how perfectly. Her best security from the danger of an autocratic rule lies in the development of a body of women who will think for themselves, and whose ideas and theories are so valued as to become a part of the very warp and woof of the association. In this way only can esprit de corps be developed, and in this way only will united strength be achieved. If these ends are gained, a superintendent may well feel that she can sing her nunc dimittis, for the welfare of the association will rest on no ephemeral advantages, nor on the personality of any single individual, but will be secure in the united strength of all its workers.—Mary S. Gardner, "Public Health Nursing."

The MODERN HOSPITAL

Editorial Office . . . . . Conway Building, Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd . . . . . Fidelity Building, Baltimore
Frederic A. Washburn . Mass. General Hospital, Boston
Winford H. Smith . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater . . . . Mt. Sinai Hospital, New York
W. L. Babcock . . . . . Grace Hospital, Detroit
John A. Hornsby . . . . . Conway Building, Chicago

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The Cleveland Meeting

Elsewhere in this issue and in succeeding issues of THE MODERN HOSPITAL papers read at the Cleveland meeting will be published. It was a wonderful meeting we had at Cleveland, and under the spur of the critical situation of the country, because of the war, we got down to fundamentals in the discussion of vital hospital problems to a degree that would not have been attained but for the peculiar and unusual situation in which our country finds itself.

From the very moment that delegates to the convention began to arrive in Cleveland up to the last moment of the last departing guest of the night of the last day, a spirit prevailed full of calm determination on the part of everybody to learn what was expected by the hospitals of the country and to do that thing and to do it well.

Heretofore at our conventions there has been a rather insistent demand for the lighter side of convention life, for features of entertainment, diversion, recreation, and sight-seeing; this time the very air itself was fraught with a seriousness that left no time or inclination for frivolities or social features. War, in the past, has always brought with it momentous epochs for the hospitals wherever the war occurred; indeed, every evolution in hospital progress seems to have dated from a war. The Cleveland meeting was typical of the birth of such an epoch. Without question the meeting at Cleveland brought a new turn in the affairs of the civil hospitals. At that meeting a new spirit, new methods, new inspiration were born. A warning was sounded at the meeting that inefficiency, uncertainty, and purposelessness could no longer be patiently borne, and those who were at the meeting knew when they left for home that new responsibilities were upon them and that they were to be measured in their administration by new rules; that the old days of shiftlessness and easy-going ways were ended; that those who could not measure up to the new order of the day would have to step aside and make place for others who could measure up to the demands of the time; that there was to be no more of "I can't," and that "I will" was to take its place.

If the War Department's views as to the new duties of the civilian hospitals are accepted—and they must be—the next few years are to reveal a new mark in the hospitalization of the civil population. Heretofore only 10 or 12 percent of the people of this country who were frankly sick and in need of a doctor went to the hospitals; now that the medical profession must be drafted for the war, and the nursing profession as well, it is to be necessary that many times more sick people must go to the hospitals and out of their homes, in order to get proper care. If this means anything, it must mean a tremendous growth in the number of hospitals and in bed capacity of those that are now in existence. The question is whether we hospital people are big enough and broad enough and efficient enough to answer the country's call and "do our bit." THE MODERN HOSPITAL answers this question in the affirmative. We are big enough and broad enough, and we are efficient and well trained in our duties and will measure up to what the country demands of us.

The Dispensary as a Factor in Public Health Work

Dispensaries in the English-speaking world began at the end of the seventeenth century as centers from which medicines were distributed to the poor. Then they advanced to be institutions in which medical advice and treatment were furnished and the giving of medicines became incidental. Not until the end of the nineteenth century did they become factors in public health work.

It was the antituberculosis movement that began it. In 1900 there were in the United States about three clinics for the diagnosis and care of tuberculosis; in 1905 the number had increased to nearly twenty; twelve years later there were five hundred. This rapid increase is evidence of

the growth of the organized movement to cure and prevent tuberculosis; but it is also an indication of something more: it manifests a new point of view with reference to the dispensary itself.

The original dispensaries were medical soup-kitchens. The very poor, the down-and-outers, were expected to come and get advice and a prescription. But with the growth of medical science, in power to prevent wholly or largely in number of diseases, a new point of view has arisen, which now dominates all progressive public health work. This point of view is not the passive attitude of the old dispensaries or of the old public health departments. The modern public health department does not merely wait until complaints come to it; it feels the responsibility of being an active factor in the community. So the tuberculosis dispensary starts in a neighborhood as part of an aggressive attempt to find all the cases of tuberculosis that it can and to cure and prevent all that it can. It is a militant agent.

So, too, have been the babies' dispensaries, or "well babies' clinics," which, hardly existing ten years ago, now dot our large cities and have spread to many small ones. The same spirit of militant endeavor to reach those who need service animates the clinics for mental diseases which are being connected with our hospitals for the psychopathic and the insane. So with the prenatal and obstetrical clinics which maternity hospitals and public health departments are annually establishing in increasing numbers; so with the dental and other clinics for caring for various diseases of childhood; so with many dispensaries attached to industrial establishments. These dispensaries are all part of a determined and conscious endeavor to do what the advertising man calls "get out after the business."

We may expect these types of dispensaries to develop further in this country. The war will expedite rather than hinder their development. To prevent tuberculosis and infant mortality is more important to a nation during war than during peace. So also the diagnosis and treatment of venereal disease will probably enter into the work of dispensaries in a much larger degree than heretofore, because of enhanced realization of the need for dealing with this problem.

But how has this militant public health spirit affected—how should it affect—the large out-patient departments of the great general hospitals? How should it affect the dispensary which is independent of a hospital? How it should affect the out-patient department of the hospital in the moderate-sized town? These out-patient departments and dispensaries have been increasing in number and in importance in recent years. Their technic, while still often open to criticism, has improved. To what extent are they—and to what extent can they be—factors in the direct promotion of public health and in the prevention of disease?

The general dispensary or out-patient department has large opportunities for preventive work. In the first place, the dispensary reaches disease in its earliest stages. Hospital wards receive the patient when he is acutely ill, when the disease is advanced, when it is often too late to do more than treat the final symptoms or perform the radical operation. If the dispensary does good work for its patients many hospital cases will be avoided, many workers can be kept at their daily tasks with benefit to themselves, their families, and their employers.

The dispensary is a means of supervising the convalescence of hospital patients or patients recovering from disease in their homes. It is a means thus of promoting health and of saving money for the community by keeping people under medical supervision during that period when they are likely to overdo and cause relapse into serious illness.

Then, again, the host of minor diseases, which never enter a hospital and which those of moderate means will rarely take to the private doctor, come to the dispensary in numbers. The treatment of minor disease is often a preventive of serious disease and is also worth while for its own sake. Minor diseases diminish the comfort and the efficiency of the adult. They are a drag upon the development of healthy childhood.

In all these relations to the early stages of disease, to minor illnesses, and to convalescence, the dispensary is a factor in public health work exactly in proportion as it performs its medical functions efficiently. A social service department is an essential element in a good dispensary, both for curative and for preventive work; but the social service is of importance to the institution primarily because of its contribution to medical results. Good medical service, accurate diagnosis, effective treatment—these are the foundation of all work in the dispensary, and the basis of its usefulness as a public health factor. Hasty examination of patients, loose prescribing, inadequate follow-up systems, are fatal to the realization of the dispensary's service in either cure or prevention. Because the dispensary reaches hundreds or thousands of persons, it has a large opportunity to teach as well as to heal—to distribute health literature, to inform families as to the

nature and spread of contagious diseases, to instruct mothers in the care of children, to educate housewives, these trying days of war prices, in the better selection and preparation of food.

The realization of all these and of many other public health possibilities of the dispensary depends on its medical efficiency and also on its possessing the militant attitude toward the health of the people. No medical institution can afford to be passive these days. To conserve and promote health is a national asset in hours of peace, but a national need in time of war.

MICHAEL M. DAVIS.

The War This Month

The event of greatest interest to the hospitals that has happened in connection with the war during the past month is the publication by the War Department of a scheme by which hospital interns, and incidentally medical students, are to be exempted from service either in the medical corps or in the drafted army. This has been a matter that has caused very great concern in medical and hospital circles. Dr. Goldwater, representing Mayor Mitchell's state council of defense, has been at the head of a propaganda for the past month to bring about this exemption of interns.

The provost marshal general has been unable to see his way clear to exempt interns from the processes of the draft law, and great numbers of these young men who had been drafted have applied for and obtained commissions in the Medical Reserve Corps, and in every instance they were compelled to subscribe themselves as ready for immediate service for war duties. The carrying out of this process would have almost cleaned out the hospitals of the country so far as interns are concerned, because practically 90 percent of hospital interns are within the draft age, and most of them are physically and professionally eligible for war duty.

It has been agreed now that these interns may join the Medical Reserve Corps with the understanding that they will be permitted to serve out their internships before being called into active service. The exact process is that they place themselves at the disposal of the surgeon-general, who has always been heartily in favor of keeping interns in the civilian hospitals until their internships had been served.

Hospital superintendents need have no fear now of losing their interns; before this announcement is published the exact mechanism by which these exemptions are to be had will have been issued by the surgeon-general. At the present writing that machinery has not yet been announced. The same order carries with it the exemption of medical students in their second, third, and fourth years. This decision regarding both students and interns has very far-reaching significance. Great Britain at the beginning of the war depleted her medical schools, sending the students into the line army, and this has resulted in the utter stagnation of medical education in Great Britain, to so great an extent even that the civilian population of Great Britain is now suffering intensely for want of medical attention. On the average, in the British Isles there is only one civilian doctor to every 6,000 population. In this country we have about one doctor to every 500 population. The United States population has been appealed to by the British to furnish physicians to take care of Great Britain's civil population for the period of the war, and our War Department is now energetically preparing to furnish some 3,000 doctors for this purpose.

At the beginning of the war, Great Britain's interns were all sent into the army medical service, and civilian doctors who were past the age of active service were sent into the hospitals to attempt to carry on the work of interns, with deplorable results. Great Britain's medical schools are now made up of foreign students, Chinese, Japanese, East Indians, and representatives from nearly every part of the orient.

The action of our War Department will undoubtedly have the effect of conserving our medical resources and of continuing the education of young men for the eventuality of the continuance of the war over a long period.

The Hospitals and the War

Major Winford H. Smith, Medical Reserve Corps, in his address on "The Organization of Civilian Hospitals for War," told the Cleveland convention just exactly what the country expected of the hospitals and what their limitations of service were to be.

The civilian hospitals are not to prepare themselves to care for the wounded and sick soldiers of the war; they are not to be pressed into the service as war hospitals in any respect. This plan may be changed later on as conditions change, Major Smith stated, but the government, at the present time, contemplates caring for sick and wounded soldiers and sailors in specially prepared government military and naval hospitals.

The duty of American hospitals, as Major Smith outlined them on the authority of the Surgeon-General of the Army, is to be summed up as follows:

1. To release the largest possible number of

medical staff members for service in the Medical Reserve Corps of the Army and to make good their loss by the addition of other men in civil life in the community who are ineligible for military service and who can render good service to the sick in the several branches of medicine.

2. To arrange for the release of the largest possible number of interns compatible with the maintenance of good service to the civilian population.

3. To release the largest possible number of trained nurses and to fill their places in the hospitals by bringing in untrained young women as pupil nurses.

4. To release the largest possible number of scientifically trained heads of the various hospital departments for war service and to fill their places by bringing in other and partially trained men and women to get the continuance of their training in the hospitals.

5. To release the largest possible number of trained orderlies and other hospital help for war purposes and to bring in and train others who are not now trained.

6. To perfect the organization of the civilian hospitals to the highest possible point in order to take care of a larger percentage of the civilian population, in order that the time and energy of doctors and nurses may be concentrated in the handling of large numbers of patients in groups instead of singly and at their homes.

7. To improvise the necessary number of additional beds to take care of this larger percentage of the civilian population.

8. To bring down the per capita costs of hospital maintenance to the lowest possible figure commensurate with the highest possible order of scientific service, in order to release more and more funds for the benefit of the sick and wounded of the war.

9. To conserve supplies and hospital commodities in order to leave that much more for the purposes of the War Department.

10. To buy whatever supplies and commodities may be necessary in the most judicious manner possible in order to interfere as little as possible with the needs of the army and navy.

In brief, these are the duties of the civilian hospitals for this war, as indicated by Major Smith in his address at Cleveland, under the inspiration of the War Department. The message of the Surgeon-General to the civilian hospitals of the country, as transmitted by Major Smith, was so clear and concise that every civilian hospital, its superintendent, its board of trustees, and its financial supporters may know just exactly what to do, how to do it, and the result that may be expected. If not one other thing was done at Cleveland, this message was more than justification for the great gathering of hospital people there.

THE MODERN HOSPITAL suggested editorially, prior to the Cleveland convention, that the problems indicated above were pressing and insistent and that the meeting must be held this year even though we are in the midst of war and all of us busy with many other duties and obligations. The results of the meeting are extremely gratifying and satisfying, and to that extent the Cleveland meeting was a success perhaps beyond any other meeting of the association that has ever been held.

Preparedness for Actual Fighting

The daily papers are keeping our readers so well posted on the preparations of the new national army, the transfer of the National Guard over to the federal service, and the provisions for housing, feeding, and training this army of more than a million men that it is unnecessary for us to dilate on this feature. Some things have transpired, however, that are of great interest to hospital people and that are not published in the newspapers. One of these is the preparation and forwarding of ambulance companies to the western war front. Col. Jefferson R. Kean, director of the Red Cross for the first period of war preparation, was assigned about a month ago to take charge of the ambulance service in France and Belgium; he has been over there for approximately a month, getting ready to take over the ambulance service for the British, French, and American armies. In the meantime a very large number of ambulance companies have been organized, some of them in connection with the national army and a great number under the National Guard of the several states. These companies are being fitted out as rapidly as possible and made ready to go across the water; some of them have gone and are already in France.

No new base hospitals have been sent abroad during the past month; only the original eight are now over there, and field hospitals have not been forwarded. The war departments of Great Britain and France, acting in unison with our own national authorities, have agreed that the best service we could render at this time is to send individual medical men; several hundred of these men, all under forty years of age, are now at training camps learning the methods and mechanism of the military service with the intention of the department that they shall go to the front at the earliest possible moment. Other men are being sent over without diversion to the training camps. Most of these latter are the younger men, recently out of internships, from the best medical

schools, nearly all of whom have had some military training, at least in the "paper work" of War Department duties. These men, upon arrival in France and Belgium, are being sent to different stations, some into base hospitals, which were undermanned, some to field hospitals near the front, and some to first-aid and dressing stations in and about the trenches. Already, we are assured, the dearth of medical men in the British and French armies has been very greatly relieved by the accessions from this country.

If our civilian hospital authorities are wise, they now have an opportunity to strengthen their home staffs gradually, and it ought not to be the occasion for letting down the bars to poorly equipped and undesirable men on the assumption that it is only a temporary measure. We can well conceive that it is not a temporary measure. Already, we who are in close touch with the hospital pulse of this country are realizing a tremendous impetus in the growth of our civilian hospitals. As we have so frequently said, the records show that only about 11 or 12 percent of the sick who are in need of a doctor were taken to the hospitals, at the outbreak of this war, three years ago. That means that 88 or 90 percent of the sick people of this country were being cared for in their homes, an inconceivable thing in view of the fact that in this modern day of scientific medicine nearly all of the accessories and facilities for diagnosis and treatment are assembled in the hospitals and nowhere else; and it is quite certain that no sick person nowadays can get adequate attention in even the most luxuriously appointed home.

Therefore, an era is upon us the outstanding feature of which is that rich people and those in moderate circumstances who can pay a reasonable price for hospital service are now to demand that service, and almost before this war is over we may safely predict that vast numbers of our people will have been converted to the hospital habit. This means that with the close of the war and the reestablishment of normal prices for construction material and labor, there is to be a tremendous growth of our hospitals.

If this means anything, it means that this emergency should be taken advantage of by hospital authorities to reconstruct their establishments in so far as the administrative personnel is concerned. We can get along with architectural deficiencies even in the presence of a tremendous influx of new patients, but we cannot get along and give an adequate service to the sick unless our administrative forces are capable, well organized, and well drilled. This is no time for hospitals to let down the bars to inferior medical men or young women of mediocre character and attainments for training school purposes.

Warning Against Picture Takers Pretending to Represent The Modern Hospital

For a year or more some one has popped up every once in a while, in some hospital in the country, introducing himself as the representative of and photographer for THE MODERN HOSPITAL and has asked for the privilege of taking pictures about the building, which he has invariably said were to be published in this journal. This incident has been repeated many, many times; in every case the request of the visitor has been complied with, and in no case have the pictures ever reached THE MODERN HOSPITAL.

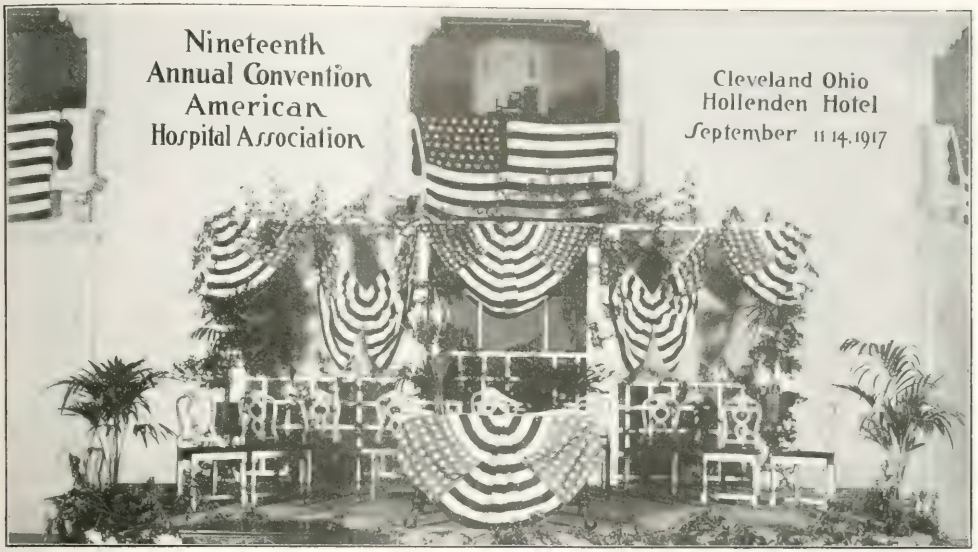
It ought to be known that representatives of THE MODERN HOSPITAL visiting hospitals will always have credentials with them, and superintendents of institutions are warned especially against photographers representing themselves as our agents. We have no official photographers on the road anywhere, and if, as occasionally happens, we give a commission to a photographer in some city to take photographs for us in some particular hospital, he will also have a telegram or a letter as his authority, as representative of this journal.

There seems to have been no attempt on the part of this mysterious visitor to defraud, and we are at an utter loss to know just what "the game" is, but please be warned.

The Public Is All Right

At a recent meeting of the British Hospitals Association in London, Viscount Sandhurst, the president, in recounting some of his own experiences in the course of thirty-six years' work in voluntary hospitals, said he had come to the conclusion that the public always had confidence in a good hospital, and, whatever its financial troubles were, would always see it through sooner or later. "And," he added, "if the public did not come to the rescue, then something was wrong with the institution."

Lord Sandhurst was not speaking of American hospitals, but he might well have been doing so, because that same experience and that conclusion is common to us on this side of the water; if the public fails to support a hospital, it is certain to be the fault of the hospital, and not of the public. Those whose hospitals are in financial difficulties may well take this to heart.



CLEVELAND MEETING TAKES UP VITALLY IMPORTANT TOPICS

Role to Be Played by Hospitals of the Country in the Present World Crisis Defined—Novel Features of the Convention

The most vitally important meeting ever held by the American Hospital Association ended its four-day session in Cleveland, Ohio, on Friday evening, September 14.

For eighteen years the American Hospital Association has met annually and has discussed the living and actuating problems of hospital architecture, equipment, and management to the very great profit and benefit of the sick and of the hospitals themselves. But all the meetings heretofore held by the association have concerned the existence and the progress of the hospitals in times of peace. Progress and improvement have been steady and gradual and almost no convention has ever had to face an epoch like this.

The world is at war and the part of our own country in that war is growing in importance and is rapidly taking on the form of tragedy. The hospitals of our country are on the tide and are being hastened into conditions never before approached—facing a time when billions of dollars are being drawn from the public pocket to win the war and many thousands of medical men are being called to care not only for our own sick and wounded soldiers, but also for those of our allies, when many thousands of nurses and trained hospital people are being drawn for the same purpose, depleting our hospitals of the scientific and trained personnel necessary to their conduct, and when the vast funds, amounting to nearly a billion dollars a year, needed for the operation of American hospitals are being diverted into other channels. These were the conditions facing the hospital people in their meeting this year at Cleveland.

What was to be the part that our hospitals were to play in the tragic history now in the making? What were they to do to help win the war? These problems were uppermost in the mind of every hospital administrator and every trustee until the Cleveland meeting. Now the answer has been given, and every hospital administrator who took the train from Cleveland at the close of the convention knew just exactly what the part of his hospital or her hospital was to be in the face of the war, and what action was necessary to be taken. This is what the Cleveland convention accomplished.

When President Wilson dropped his gavel at nine o'clock on Tuesday morning, September 11, there faced him in the large assembly hall of the Hollenden Hotel more than 500 hospital administrators; the halls and corridors outside the convention room were filled, the lobbies of the hotel were crowded with an eager throng, and it seemed for a time that hotel accommodations were not to be had. Eventually, however, Cleveland took care of the more than 1,200 people who had assembled for the convention and did it in a splendid and most hospitable manner.

Cleveland had prepared for the convention. The decorations of the assembly hall were beautiful and imposing; American flags, artistically draped, decorated the platform; festoons of green and the national colors were interwoven about the walls. Masses of flowers were everywhere.

The arrangements for the convention were not quite so happy as were those in Philadelphia last year, but only because the architecture of the Hollenden Hotel did not permit so convenient an arrangement for the meetings of the convention and for the commercial and the non-commercial exhibits. It seemed, at first glance, as though the commercial exhibits were better situated than last year because large numbers of them were grouped in the immense assembly hall itself and others were installed beyond the great archways and in alcoves beyond. It was

unfortunate that this arrangement made it impossible for visitors to the exhibits to pass to and fro among the exhibits and to talk and ask questions while the meetings were going on.

The non-commercial exhibit was forced off through a remote corridor and in an inconspicuous place, difficult to find, a fact that was greatly to be regretted because the non-commercial exhibit this year exceeded anything that had ever been attempted before; indeed, it was well worth careful study.

The registration rooms were immediately at the entrance of the assembly hall and were in charge of trained young women, who handled the business of registration with promptness and efficiency.

THE MODERN HOSPITAL BUREAU OF INFORMATION

The Bureau of Information and service conducted by THE MODERN HOSPITAL was installed in a large, well-lighted, well-planned room just next to the registration booth, and it may be said with becoming modesty that this bureau was an attractive, interesting, and an important feature of the convention, a feature that must grow with each coming year and must be ever more important and necessary. Heretofore it has been the privilege of vistiors to the convention to ask questions of each other and talk over their hospital problems, but never before have arrangements been made whereby visitors could have the use of writing room and materials, chairs and alcoves for carrying on conversation and visiting. Visitors proved desirous of ascertaining the presence or absence of acquaintances that they hoped to meet at the convention and were enabled to locate them. Note was taken for use on future occasions that a large number of inquiries were made for visitors grouped geographically; for example, a person would inquire for all those who had registered from Detroit. Thanks to the local knowledge, tact, and energy of Miss Celia Kessler, a member of the Mount Sinai Hospital clerical staff, whose services were kindly lent by Mr. Chapman, this bureau proved of considerable utility to the visitors. Local information of all kinds and that relating to transportation were much in demand, and Miss Kessler's courtesy and attentiveness under high pressure demonstrated to all visitors to the convention what an ideal telephone operator should be.

Above all, arrangements have never been made before whereby visitors could see hospital plans and hospital photographs. This year many of the best hospital architects in the country were pleased to send their best hospital plans for exhibition purposes, and the rooms of THE MODERN HOSPITAL bureau were full of well-indexed and well-placed hospital plans, classified so that visitors could see great numbers of plans of any class of hospital in which they were interested. The following architects were represented: Olof Z. Cervin, Rock Island, Ill.; Crow, Lewis & Wickenhoefer, New York City; Gibb & Waltz, Ithaca, N. Y.; Harold F. Kellogg, Boston, Mass.; Ludlow & Peabody, New York City; McKim, Mead & White, New York City; George B. Post & Sons, New York City; Schmidt, Garden & Martin, Chicago, Ill.; F. W. Striebinger, Cleveland, O.; Meyer J. Sturm, Chicago, Ill. The Minnesota Advisory Commission of the State Sanatorium for Consumptives had a large exhibit of plans and perspectives of sanatoriums of various sizes.

This exhibit excited considerable interest and there were many visitors to it, especially in the evenings. It is to be hoped that this feature will be developed at future conventions, and that, with the cooperation of the architects, a guide to the display will be prepared, so that visitors may find those parts in which they are most interested. It would also be useful if plans of special units could be shown together. There was a special demand for plans, photographs, and details of equipment of general and diet kitchens. Inquiries were also numerous for psychopathic and contagious disease hospitals.

The social features of the convention at Cleveland were, as they were expected to be, reduced to a minimum as to variety, but those that were permitted were of deep interest and were immensely enjoyed. Mr. Chapman and Mount Sinai Hospital formed an entertainment host at the luncheon held in that institution that will be long remembered by those who had the privilege of enjoying it. Mount Sinai Hospital is a beautiful institution, new, and as designed by Dr. Goldwater has many features that were of great interest to the visitors; indeed, it was a liberal education to be privileged to go through the hospital. Mr. Chapman's luncheon, held on the lawn and served by the nurses, was an innovation, something like that given to us at San Francisco two years ago on the lawn of the county farm, where huge piles of native fruits and a most delicious luncheon, served by bevies of nurses from the various city institutions, formed one of the features of the great San Francisco meeting. Mr. Chapman's luncheon will be remembered, as that other luncheon is remembered, with great pleasure.

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Rochester, N. Y.

The visit to the Cooley Farms was another feature that hospital people will not find duplicated anywhere on this continent. The plain stucco buildings of modern architecture and the two thousand acres of high rolling farm were a marvel to see, and, more than all else, Cleveland's foresight and thoroughness in looking after its dependent sick out in the country could not help but be admired. The lesson learned there will go home with everyone who attended the meeting, as an illustration of the goal to be sought by other communities in their endeavor to serve the sick.

A great many visitors went to Lakeside Hospital and there saw one of the best administered and one of the most complete hospitals in the country. It is to be regretted that the new building for Lakeside is not yet erected. It is to be a magnificent, three-million-dollar institution, in keeping with the prominence of the city and its already great size and importance and the generosity and humanitarianism of its people.

The local committee is to be sincerely congratulated upon the completeness of all arrangements for the convention; on its physical side the convention was a great success; there were no hitches anywhere, no embarrassments of any kind, and the hospitality of all the people, and the attentiveness of those whose duty and pleasure it was to look after guests at the convention were all that could possibly be desired. As a whole, the Cleveland convention will mark one of the high points of importance and interest to the association.

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WHAT WAS DONE AT THE CLEVELAND MEETING

Scientific and Business Program of One of the Most Successful Conventions in the History of the American Hospital Association

BY ROBERT J. WILSON, M. D., New York, President of the American Hospital Association.

In the absence of the mayor, the director of public welfare, Lamar T. Beman, on his behalf welcomed the association to the city and pledged the city to cooperate in every way with the association to make the convention a success for the good of the hospitals and the welfare of the country. On his own behalf, the director of public welfare, having charge of the city's hospitals and correction institutions, notified the association that the various heads of the divisions under his control had been instructed to welcome the members as visitors irrespective of visiting hours and to afford them every opportunity to study the character of the buildings and their modes of administration.

The response to the address of welcome, made by Dr. J. W. Fowler, of Louisville, Ky., was replete with poetic reference to the city of Cleveland and its people. The report of the secretary, which was in reality the minutes of the previous annual meeting, as well as the minutes of the meetings of the trustees, suggested various changes in the constitution and by-laws that did not materially change their general intention, but did give opportunity for more systematic and businesslike methods of keeping the records of the association.

The report of the board of trustees recommended an amendment to the constitution giving a broader definition of its aims and objects, with the end in view of incorporation either by act of Congress or under the law of the District of Columbia. This report also gave a concise account of the work accomplished by the trustees during the past year, the most important item of which was the effort used in connection with the adequate solution of the problem regarding the exemption of medical students and hospital interns who had been called to military service under the draft law.

The paper of Dr. Donald E. Baxter on the "Organization and Direction of After-Care for Poliomelitis" was a description of the methods observed by the New York committee on this subject in preparing for the close observation, proper registration, and medical supervision of the cases of paralysis resulting from the epidemic of anterior poliomyelitis which occurred in the city of New York in 1916. The very great care observed by this committee in preparing for the expenditure of the funds raised and the accomplishment of its object represents a good example to be followed in other emergencies of like character.

The report of the committee on out-patient work, by Mr. Michael M. Davis, was in reality an appeal to the association for better administration of dispensaries along the lines suggested by the committee, which had proved to be successful in practical work at the Boston City Dispensary.

A very excellent paper on "Publicity as a Means of Education and Support" was read by Mr. Frederick D. Greene, of the Associated Hospitals of New York. Mr. Greene's advice to the members of the association urging the careful preparation of the statement of the finances of the hospital to be presented to prospective patrons of the institution, so as to be readily understood by anyone, should receive the earnest consideration of every hospital supported by a voluntary contribution. His suggestions relative to information available for the press and public were equally timely.

At the business meeting held after the scientific session on Tuesday afternoon, the recommendations of the board of trustees were considered and referred to the various committees, whose actions were necessary in the preparation of resolutions to be presented, in accordance with the requirements of the constitution and by-laws.

In the absence of the chairman of the committee on health insurance, this report was submitted by Mr. Michael M. Davis, another member of the committee, and its discussion disclosed the fact that most of the members of the association were looking forward with various emotions to the enactment of laws which would be of mutual advantage to the employer and employee and eventually meet the needs of the nation.

In the discussion comment was made on the fact that the state of Ohio had appointed a commission and voted a sum of money sufficient for its needs, to study the situation and report back to the legislature the results of the findings and recommendations for future legislation, which it is hoped, will solve the problem of health insurance for the state of Ohio, and help in its solution for other states having membership in this association. That the deliberations of this committee will be of value to this association is assured by the fact that our first vice-president is one of its members.

Dr. Thomas Howell, superintendent of the New York Hospital, an institution situated in the heart of the industrial district of New York City, read a paper on "The Workmen's Compensation Law and Its Relation to Hospitals," which, if carefully studied and the directions given therein followed, will obviate the usual difficulties that superintendents find in complying with the law. The historical information of this paper, together with the explanation of the workings of the compensation law in the various states, were particularly clear.

The paper of Mr. Pliny O. Clark, Wheeling, W. Va., on "Hospitalism, Its Causes and Treatment," will prove of

especial value to the members of the association who follow its advice. Mr. Clark attributed hospitalism largely to a lack of proper sociological investigation and medical study, and believes that when hospitals perform their full duty in these matters the evils of this character will be reduced to a minimum.

A paper of unusual interest and the one that seemed to arouse the greatest amount of enthusiasm was that on "The Reorganization of the Civilian Hospital on a War Basis." Read by Major Winford H. Smith, ex-president of this association, now attached to the office of the Surgeon-General of the United States Army, it re-received, as it deserved, the earnest attention of all the members. The words of timely warning of the unprepared condition of most of the hospitals of this country to serve the country as they are expected to do in time of war must be heeded by the members of this association if they are earnestly desirous of doing their full duty to their country.

The paper of Dr. T. N. McEachern, of Vancouver, B. C., on "Annual Reports" brought forth so much general discussion that it was at once evident that the members of the association were fully aware of the meager and frequently useless contents of their reports. The recommendation of the paper that statistical and scientific information be compiled in such a manner as to give a complete review of the hospital for each year ought to commend itself to every member.

The recommendations of Dr. Walter Morritt in his paper on "Practical Hospital Economies," if carried out, are sure to add to the efficiency of any hospital.

The report of the committee on accounting, presented by Dr. A. R. Warner, Lakeside Hospital, Cleveland, Ohio, was received with enthusiasm and adopted by the association. In the discussion that followed the reading of this report, the members of the association generally pledged themselves to follow the procedures recommended in so far as they were able to do so under the laws governing their various institutions.

DR. A. B. ANCKER,
President American Hospital Association
Superintendent St. Paul City and County Hospital, St. Paul, Minn.

DR. WILLIAM H. WALSH,
Secretary,
Philadelphia, Pa.

MR. ASA BACON,
Treasurer,
Superintendent Presbyterian Hospital, Chicago, Ill.

The report of the committee on standardization of hospitals, presented by Dr. W. H. Smith, was in reality a continuation of his morning paper on the subject of the reorganization of the civilian hospitals.

Mr. F. E. Chapman, superintendent of Mount Sinai Hospital, Cleveland, Ohio, presented a paper on the

"Equalization of Departments in Accounting," which, if carefully heeded by members of this association in studying the cost of operating and maintaining the various divisions of their hospitals, will certainly lead to lessening of total expenditures and prove the exact relation of departments to each other, in their relative cost and usefulness.

DR. A. R. WARNER,
First Vice-President,
Superintendent Lakeside Hospital,
Cleveland, Ohio.

MR. E. S. GILMORE,
Second Vice-President
Superintendent Wesley Memorial Hospital,
Chicago, Ill.

DR. WINFORD H. SMITH,
Trustee,
Superintendent Johns Hopkins Hospital,
Baltimore, Md.

MISS MARY L. KEITH,
Trustee,
Superintendent Rochester General Hospital,
Rochester, N. Y.

Papers were read on "Oil as a Fuel" by Dr. John M. Peters, Providence, R. I.; "The Hospital a Teaching Institution" by Dr. Harold C. Goodwin, Albany, N. Y.; "War Hospitals of France and America"; "The Relations of the Superintendents to Research Work" by Dr. H. O. Collins, Minneapolis; and "Municipal Training Schools" by Dr. Cleveland H. Shutt, St. Louis.

"The Relation of the Superintendent to the Governing Board and Obligation as Admitting Officer," read by Miss Alice C. Cleland, Northampton, Mass., reiterated the necessity of carefully defining the duties of the superintendent in these relations and seeing that he or she is empowered to carry out their provisions. Its discussion also em-

Members of the American Hospital Association on their visit to Mount Sinai

phasized the fact that there are a great many small hospitals in this country which do not carry out even the rudiments of diagnosis on admission, or preserve vital statistics of the slightest degree of value to the country.

Miss Nellie F. Parrish, Mr. Joseph Geffen, and Dr. H. J. Moss also read papers of general interest to the members.

The address of Hon. Alfred T. Fleming, representing Hon. James M. Cox, governor of Ohio, was received with enthusiasm by the association.

The address of Dr. Henry C. King, defining the aims and purposes of the League to Enforce Peace, was also enthusiastically received.

The address of Major Hoover, who has just returned from France, where he was in charge of the medical work of the Lakeside unit, proved of great interest to the association. The first-hand information thus received as to war conditions at the front gave the members of the association some realization of what they may expect to contend with when our own troops are actually engaged in active military duty at the front.

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Luncheon at Mount Sinai Hospital

A most enjoyable side trip, as a break in the regular convention program, arranged by the local entertainment committee, was an automobile ride, followed by a luncheon at which Mr. Chapman, superintendent of Mount Sinai Hospital, acted as host.

Immediately after the Wednesday morning session the members and visitors were met at the Hollenden Hotel by over 300 machines, which were lent by the public-spirited Cleveland people. The machines were preceded by a squad of motorcycle policemen, and the visitors were driven through the business section and out to Mount Sinai Hospital. A buffet luncheon was served on the lawn, the visitors seating themselves in a circle and being served by nurses. A very appetizing lunch was served, after which the visitors were escorted through the hospital. It is enough to say that Mr. Chapman's efficiency as a superintendent was displayed in the selection and serving of the luncheon. Everybody present seemed to feel his personal magnetism.

After luncheon a group picture was taken of all visitors, and they were again escorted to the machines and taken for a ride through the various parks and the beautiful residential sections of Cleveland and out to the Cooley Farms, which were inspected with a great deal of pleasure. The route selected was chosen by Mr. Alward, of the Simmons Company, and a more ideal selection of streets and beautiful places could not have been chosen.

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New Officers of the Association

The officers elected by the American Hospital Association for the ensuing year are: Dr. Arthur B. Ancker, superintendent St. Paul City and County Hospital, St. Paul, Minn., president; Dr. A. R. Warner, superintendent Lakeside Hospital, Cleveland, first vice-president; Mr. E. S. Gilmore, superintendent Wesley Hospital, Chicago, second vice-president; Miss Grace Fairley, lady superintendent Alexander Hospital, Montreal, third vice-president; Mr. Asa S. Bacon, superintendent Presbyterian Hospital, Chicago, treasurer; Dr. William H. Walsh, Philadelphia, secretary; Miss Mary L. Keith, superintendent Rochester General Hospital, Rochester, N. Y., trustee.

It was fitting that the Cleveland convention should elect, as its president, one of the most efficient hospital administrators in this country. Dr. Arthur B. Ancker began his hospital career thirty-four years ago in a little makeshift private residence temporarily fitted up as the St. Paul City and County Hospital. His institution has steadily grown in size, in service, and in importance until it is now one of the foremost hospitals of this country, and this in spite of the fact that municipal hospitals as a rule are not con-

Hospital, Cleveland, during the nineteenth annual convention.

sidered among the best institutions that we have. One may wander through the hospitals of this country and every little while he will find some architectural feature or some new method of management or some new piece of equipment which originated in Dr. Ancker's institution.

Dr. Warner's administration of Lakeside Hospital, Cleveland, is one of the bright spots in hospital management of today. Dr. Warner himself has introduced new features in economy and new points in service. He has brought his dietetic department to a high state of perfection. He himself has done more in the perfection of oxygen-nitrous oxid anesthesia than all of the rest of us combined.

Mr. Gilmore, second vice-president, has demonstrated what may be done in a few years with a hospital almost on its last legs. When Mr. Gilmore took charge of Wesley Hospital, Chicago, its financing was wretched, its debts were large, its credit was nil, and its administration and its service to the sick were of the worst. In Mr. Gilmore's administration the debts have all been paid, the hospital has been almost reconstructed, new additions have been made, the scientific departments have been brought up to a point of modern efficiency, large amounts of endowment funds have been given to it, and the hospital today is a prosperous and a most useful institution.

Miss Fairley is Canada's contribution to our official family. She is an able hospital administrator, and her own hospital, under her hands, has become one of the substantial and strong institutions of Canada. Moreover, Canada deserves much at the hands of the American Hospital Association, as she deserves much at the hands of the world. Canada is making a glorious fight for democracy. Her sons are giving their lives by thousands for the principle which we all today are brought to serve, and her hospitals are taking a foremost part in the reeducation, the reconstruction, and the rehabilitation of those who are coming back maimed and crippled and who must make new arrangements for independence and a living. When the story of Canada's hospitals during the war is told it will be a historic and wonderful narrative of patriotism and high purpose. It is little enough that we have done in electing Miss Fairley one of the officers of the association.

There is little that needs to be said about Mr. Bacon; officers come and officers go, but Mr. Bacon is treasurer forever.

The thanks of the hospital world are due to Dr. William H. Walsh for his splendid administration of the association during the past year, and his reelection was, of course, a foregone conclusion. Dr. Walsh has breathed new life into the affairs of the association. He has put the organization on the map, and, although he has been modestly feeling his way for the past year, he has done a tremendous amount not only to serve the association, but also to serve the hospitals of the country.

And now just one word about the trustees: there was a question in the minds of a great many people, when our new constitution was adopted at Philadelphia, whether a partly permanent board of trustees might not be the process for the setting up of an autocracy in the management of the affairs of the association, and by many it was thought better to continue the election of a complete board of trustees each year in order that the association members might always and at any meeting be entirely free to express themselves as to policies and plans for the association.

The past year has demonstrated beyond question that the creation of a board a majority of whose members continue in office from year to year is the wiser plan. Our board of trustees has been conservative yet progressive. Its policies have been safe and sound. The association is in good hands, and because of the wisdom of the board the association is now upon a firmer footing, with hardly a chance for any error or for mismanagement or for false moves.

Miss Mary L. Keith, elected last year for the short term of one year, was reelected at Cleveland for a full three-year term.

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The Next Meeting

There was a good deal of discussion as to the next meeting place. The committee on time and place, composed of Dr. H. O. Collins, Minneapolis, chairman; and Dr. J. W. Fowler, Louisville, Ky., and Dr. S. A. Sexton, Baltimore, members, were not a unit on the recommendation. Dr. Fowler was anxious for the convention to go to his city, and the other members felt that the next meeting should be held in the East. There were members of the association who favored Washington, because of the war and the importance of having the meeting where the heads of the War and Navy Departments and the Public Health Service could attend. Others felt that, while it was important that the meeting be held near the center of the country's greatest interest, yet Washington itself could easily be so crowded at the meeting time that the association would not be able to hold the attention of the delegates, even if there were hotel accommodations for all.

It was eventually decided to make the choice either Washington or Baltimore, with a majority favoring the latter city. Discretion was left to the board of trustees to choose between the two cities and to fix the precise date.

It was somewhat embarrassing to Dr. Fowler to be a member of the committee, as he was a strong and interested advocate of his own city as the meeting place; he would have been more free to fight for Louisville if he had not been on the committee. This experience will probably lead, in the future, to the naming of a committee none of whose members has a personal interest in any city inviting the association.

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PROGRESS OF THE AMERICAN HOSPITAL ASSOCIATION

Annual Report of the Secretary, Dr. William H. Walsh, Shows Flourishing Condition—Gratifying Range of Activities

As this is the first report submitted to the association by the secretary since the appointment of such an officer was authorized, there will naturally be some departure from the custom of former years. In this report an attempt will be made to review the work of the office during the past year, to comment fully upon the affairs of the organization, and to offer suggestions and recommendations for the future.

Although it was distinctly understood at the time of the appointment of the secretary that his full time would not be demanded by the association, it soon became manifest that, in order to do justice to the work confronting him, not only full time would be required, but considerable overtime; consequently for the first seven months practically all of the secretary's time was consumed in perfecting a suitable accounting system, correcting the membership list, outlining plans for development, and attending to the vast amount of correspondence incident to the publication of the 1916 Proceedings, the preliminary plans for the new commercial exhibit, and the Bureau of Information and Registration.

The past year has been one of fruitful progress, and it can be authentically stated that the affairs of the American Hospital Association were never in a more healthful state.

PUBLICITY

Every effort has been made to acquaint the public and more particularly the various allied professions with the objects and aims of the association, and no opportunity has been lost to obtain publicity when it was thought that it would be beneficial. Our current transactions have been listed in the various exchanges, and copies have been sent to the large metropolitan libraries.

The secretary has endeavored to publish bulletins of interest to the membership each month in those periodicals reaching hospital people, wherein the trustees' meetings have been noted and other items concerning the work of the office have been recounted with the hope that such information would stimulate interest in the affairs of the organization. It is too early to form any definite idea as to the value of our bulletins, but we have received many inquiries that can be traced thereto. We also believe that a number of new memberships were secured as a result of this publicity. The secretary wishes to tender his grateful thanks to THE MODERN HOSPITAL, the *Southern Hospital Record,* and the *Trained Nurse and Hospital Review* for the gratuitous space freely offered.

One of the principal sources from which this office hoped to secure valuable information for publication in the form of bulletins was the various committees, and in this connection a letter was addressed to the chairman of each committee, asking for items of interest relating to their special field. It must be frankly stated that there has been little response to this appeal with but a few conspicuous exceptions. The hope is expressed that during the coming year the various committee chairmen will take more interest in this valuable feature.

MEMBERSHIP

A constant effort has been made to increase the membership of the organization, and, although this labor has not shown any remarkable results, it has justified the time and expense incident thereto. Were it not for the ever-present necessity for the conservation of our financial resources, more spectacular results might have been reported. It should also be here noted that the facility of procuring new members is in direct proportion to the benefits offered to prospects, and until such time as *interested* persons can be convinced of the value of membership, it will be somewhat difficult to interest the skeptical.

Elsewhere in this report will be outlined a plan for the enlargement of our association by means of a membership campaign, and the attention of all members is urgently directed thereto.

The membership list to date shows the following members in good standing: members, 1,149—active, 870; associate, 264; honorary, 10; life, 5.

The following are the delinquents to whom several bills have been sent with requests for payment. We have never had a reply either in the form of a remittance or a letter. It is improbable that we have the incorrect addresses, because the letters have never been returned: delinquents, 84—active, 59; associate, 33.

It would be quite incorrect to say that the following members have resigned during the past year. A large number replied to our requests for payment of dues with the information that they had sent in letters of resignation previous to the 1916 convention, some in 1914, 1915: resignations, 32—associate, 5; active, 27.

We now have the cards of forty members showing no addresses. The 1916 Proceedings and bills for dues were mailed to these members, but in every case both were returned marked "not at," "removed."

Some of the Exhibits at the Convention of the American Hospital Association

1, "Information Bureau," conducted by THE MODERN HOSPITAL, and showing the exhibit of hospital plans by prominent architects. Here all mail for members and guests was distributed and telephone calls received; 2, a corner of one of the commercial exhibit halls; 3, the noncommercial exhibit of the Cleveland Society for the Blind; 4, the noncommercial exhibit of the New York State Hospital Commission; 5, a view of the meeting hall, showing how some of the commercial exhibits were arranged around the sides of the room.

From September, 1916, to September 1, 1917, 134 new members have registered.

BUREAU OF REGISTRATION AND INFORMATION

The inauguration of the Bureau of Registration and Information has created a very favorable impression, and quite a number of new members were secured through its activity. As funds become available the scope of the work may be enlarged until this feature alone will make membership well worth while. The attention of members is invited to the fact that the bureau cannot be expected to supply nurses, at least for the present. To move a nurse from one part of the country to another in the hope that she will meet the requirements of the vacancy is a very unsatisfactory method of filling such positions, and members are advised to utilize the services of the bureau only when executives or heads of departments are desired. At headquarters a register is maintained upon which are recorded the names and data concerning all applicants, and also the vacancies existing. From this information a constant effort is made to satisfy all of the demands made upon us.

The secretary believes that this is an opportune time to formulate a definite policy with respect to the work of the Bureau of Registration, and with that end in view the office has already refused to supply a qualified superintendent to a hospital that was notoriously mismanaged. While the association has not as yet placed itself upon record as to the standards for a reputable hospital, it does not require such action to determine that certain so-called hospitals are not suitable places for qualified applicants. From experience already recorded it would seem necessary to remind certain institutions that in utilizing the services of our bureau the obligation of fair treatment to the appointee is thereby incurred, and that unless this obligation is fully met, the bureau will not supply a second candidate.

TRANSACTIONS 1916

The publication of the eighteenth annual proceedings was a much greater task than had been anticipated, necessitating, as it did, most voluminous correspondence. One of the greatest obstacles to the early printing of this volume was the neglect of authors to return copy, or even to respond to our inquiries regarding it. Whether or not the failure to respond to ordinary correspondence is a delinquency peculiar to hospital executives I cannot say with surety, but I can make the unreserved statement that our affairs have suffered more during the past year from this evil than from any other handicap.

It has been the invariable rule of this office to respond within twenty-four hours to all communications received, and your secretary believes that this rule has created a most favorable impression upon many who have in former years ofttimes waited a whole month for a reply to an inquiry.

Heretofore it has evidently been the custom to give free of charge a considerable number of the Proceedings. This matter was discussed by the trustees, and as a result the secretary was instructed to print upon the back of each volume the price. It has been found that certain libraries and associations to whom the book had formerly been given free were quite willing to meet the charge.

Much expense and inconvenience has been caused by the failure of members to keep the office notified of changes of address, although it is believed that this may be overcome in 1918 by sending out bills for dues prior to the publication of transactions.

NEW BUSINESS PROCEDURE

At an early meeting of the trustees it was decided to so modify the business procedure as to place most of the routine work in the office of the secretary. In pursuance of this policy the secretary was instructed to formulate a workable plan, and this was later accepted and adopted. All applications for membership are now handled entirely by the secretary, and bills for dues are sent out and collected by him. Funds of the association are deposited to the credit of the association, and once deposited cannot be withdrawn without the signature of both the treasurer and the secretary. When funds are deposited a duplicate deposit slip is forwarded to the treasurer so that he may know exactly the condition of the treasury at all times. By this method the treasurer remains the custodian of the funds, but is relieved of the heavy burden of clerical work heretofore thrust upon him.

The secretary is responsible to the trustees for all expenditures, and, when amounts exceeding one hundred dollars are involved, specific authority is required before the indebtedness is incurred. At each meeting of the trustees a full report is made of all expenditures, together with a review of the work accomplished since the last report.

In revising the accounting system of the association, the gratuitous services of Mr. Cornelius S. Loder were secured. The whole system devised and recommended by this gentleman, although approved by the trustees, has not yet been adopted on account of the expense incident thereto, and for the further reason that it was considered advisable to utilize all the old forms before ordering the new. When the complete system is in operation the business of the association will be greatly facilitated, the funds will be doubly safeguarded, and the work will be much simplified.

In formulating the accounting system now in use, it became necessary to consider the advisability of changing the fiscal year, from one convention to another, from January 1 to December 31. It is realized that a change in the by-laws is necessary to authorize this arrangement, and such an amendment will be offered at this meeting. The new plan will only change the period for which dues are paid and will not in any way increase the assessment. This scheme will simplify the treasurer's annual report, will avoid the congestion at the registration desk during conventions, and will facilitate the work of the secretary's office.

INCORPORATION

The American Hospital Association has never been an incorporated body, but the time has now come when some action in this direction must be taken. As now organized, the trustees are obliged to assume personal responsibility for all the acts of the organization, and, since financial obligations are concerned, it would hardly seem fair to continue this practice. Much study has been given this matter by the trustees, they having carefully considered the laws of various states concerning the incorporation of similar bodies. As the American Hospital Association is a national body and also because of the restrictions found to exist in almost every state, it was definitely decided to recommend that this association be incorporated in the District of Columbia either by special act of Congress or by the courts. Your secretary hopes that favorable action will be taken upon this recommendation, since the advantages are so obvious.

1917 ANNUAL CONVENTION

While this office was busily engaged in perfecting the necessary plans for the nineteenth annual convention and

the commercial exhibit connected therewith, the country was thrown into an unprecedented state of excitement by the declaration of war.

The local committee expressed a desire to postpone the convention, some prospective exhibitors hesitated about incurring new obligations, and a few members wrote intimating that the grave responsibilities incident to the war would prevent their attendance.

From the outset it became evident to the trustees that either to postpone or to omit the convention this year would be a grave blunder, and that the incidence of war only emphasized the necessity for an assemblage of hospital people. The many vital problems concerning interns, hospital staffs, organization of base hospitals, and numerous other similar matters required some authoritative solution, and, after due deliberation, the trustees passed a resolution authorizing the secretary and local committee to proceed with the arrangements and to announce that under no condition would the original date be changed. It is the belief of your secretary that the accomplishments of this convention will prove the wisdom of the trustees' decision.

The program is replete with subjects of deep concern to all the hospitals of the country, and matters of absorbing interest to those who at this time are struggling under many unusual burdens and almost overwhelming handicaps.

It will be noted that the meetings convene at 9 a. m. daily instead of 10 as heretofore. This change permits a more extensive program and makes it possible to schedule business meetings at 4:30 for the conduct of the purely business matters of the association. By this means it is hoped to avoid the confusion incident to past conventions, when scientific papers and business affairs were crowded together.

COMMERCIAL EXHIBIT

The display of hospital supplies and equipment exhibited at Philadelphia was considered by the oldest members of the association to be the most comprehensive ever assembled, and most of the exhibitors themselves were well pleased with the business transacted and the attendance. However, your secretary was far from satisfied, and, as he is compelled to assume the attitude of the manager of a commercial undertaking, he must needs be as critical as the most dissatisfied participant. In the first place, little if any recognition was accorded the commercial exhibit upon our program, which was arranged as though no such important project was contemplated; consequently *no* time was allowed for inspection, compelling those who recognized the value of such inspection to absent themselves from important meetings. In the next place, as might have been expected, some little difficulty was experienced in enforcing certain rules and regulations that were considered necessary for the ethical conduct of a commercial exhibit. With respect to the allowance of certain periods for the inspection of exhibits, it can be said that ample time has been allowed this year, and no complaint is expected upon this score. The rules regarding solicitation of business and the distribution of literature in the convention halls are more definitely understood now and will be rigidly enforced.

One obligation rests upon the members of this association, i. e., that of inspecting every exhibit, and unless all lend their cooperation to that extent, this feature of our convention is doomed to failure. No one is compelled to purchase, for the very good reason that these exhibits are primarily for advertising purposes rather than for sales.

As the report of the treasurer clearly indicates, the financial returns from our last exhibit were very gratifying, and the returns this year will about equal those of 1914.

RECOMMENDATIONS

Policy.—The time has come for this great association, representing as it does the consensus of opinion of the hospital experts of America, to fasten its faith to a few cardinal principles upon which we may hold our ground and maintain before the world an unmistakable attitude.

It is, to say the least, embarrassing for the executive secretary of this association to be compelled to reply to those who seek our counsel and advice that no definite policy has as yet been adopted upon many of the vital questions of the day.

Unless we are to fall by the wayside or delegate our responsibilities to newer and more wideawake organizations, we must meet our obligations fully, placing the American Hospital Association upon record as opposed to those things which we know to be wrong.

First and foremost, we are obliged to announce some attitude upon the question of the abuse of dispensary privilege; then in order the following subjects should be thoroughly discussed and our position defined:

1. Use of first- and second-year student nurses for private work outside hospitals without supervision.
2. Baby farms under the guise of maternity hospitals.
3. Standard course of training for nurses, and obligations of a hospital to the student.
4. Definition of a modern hospital, and a workable classification.
5. Functions of various hospital officials and their limitations: (a) trustees; (b) superintendent; (c) medical and surgical staff; (d) principal of training school.
6. Standard accounting system upon which a basis may be obtained for the comparison of different institutions.

Much could be here written upon the above-mentioned subjects, but it is the belief of your secretary that these matters should be very carefully considered by the association and further studied by a special committee charged with the task of formulating concise recommendations for submission to this body at the twentieth annual convention.

Constitution and By-Laws.—In compliance with the instructions of the trustees, certain modifications in our constitution and by-laws found necessary last year have been compiled and submitted to the committee upon that subject. No attempt has been made in this contemplated revision to make any change in the form of the organization for the reason that many of the foremost members of the association are compelled to be absent by reason of military service abroad. For the same reason it is urged that no fundamental change in our constitution and by-laws be offered at this meeting, as it would be unfair to those absent to deny them a voice in matters in which they are so deeply interested.

War Medical and Nursing Problems.—For the same reason that some of our best hospitals have been driven to the expedient of turning to fourth-year students for interns, hospitals will be obliged to consider the advisability of turning out third-year nurses to meet the community requirements should the war continue for any extended period. Any steps that may be taken tending to lower the standards of the nursing profession will of course be reluctantly considered, but facts must be faced and conditions met by intelligent and timely action.

Unless special means are adopted to add to the supply of nurses there will be no replenishment for three years. The successful waging of the war contemplates the adequate protection of the civilian population from sickness and disease, and this cannot be accomplished effectually

unless those who may justly be regarded as guardians of the public's welfare are constantly reinforced.

From the very moment of the adoption of the draft law, this organization has been hard at work in the endeavor to convince the authorities of the necessity for the exemption of medical students and interns. Early in our efforts we discovered a determined opposition upon the part of the government to the exemption of medical students or interns as a class, for the very good reason that such a ruling would immediately open up the possibility of fraud and misrepresentation. Acting upon a knowledge of this attitude, various methods were suggested for the accomplishment of our effort to prevent the complete disorganization of our civilian hospitals. On August 30 the Provost Marshal General notified the governors of all states of the promulgation by President Woodrow Wilson of supplementary regulations governing the execution of the selective service law with special reference to interns and medical students, as follows:

May Apply for Discharge

First. Hospital interns who are graduates of well-recognized medical schools, or medical students in their fourth, third, or second year in any well-recognized medical school who have not been called by a local board may enlist in the Enlisted Reserve Corps provided for by Section 55 of the national defense act under regulations to be issued by the Surgeon-General, and if they are thereafter called by a local board they must be discharged on proper claim presented, on the ground that they are in the military service of the United States.

Second. A hospital intern who is a graduate of a well-recognized medical school, or a medical student in his fourth, third, or second year in a well-recognized medical school, who has been called for by a local board and physically examined and accepted, and by or in behalf of whom no claim for exemption or discharge is pending, and who has not been ordered to military duty, may apply to the Surgeon-General of the Army to be ordered to report at once to a local board for military duty and thus be inducted into the military service of the United States immediately thereupon to be discharged from the national army for the purpose of enlisting in the Enlisted Reserve Corps of the Medical Department. With every such request must be inclosed a copy of the order of the local board calling him to report for physical examination (Form 103) affidavit evidence of the status of the applicant as a medical student or intern and an engagement to enlist in the Enlisted Reserve Corps of the Medical Department.

Will Not Be Sent to Camp

Upon receipt of such application with the named inclosures, the Surgeon-General will forward the case to the Adjutant-General with his recommendations. Thereupon the Adjutant-General may issue an order to such intern or medical student to report to his local board for military duty on a specified date, in person or by mail or telegraph, as seems most desirable. This order may issue regardless of the person's order of liability for military service. From and after the date so specified, such person shall be in the military service of the United States. He shall not be sent by the local board to a mobilization camp, but shall remain awaiting the orders of the Adjutant-General of the Army. The Adjutant-General may forthwith issue an order discharging such person from the military service for the convenience of the government.

Three official copies of the discharge order should be sent at once by the Adjutant-General to the local board. Upon receipt of these orders the local board should enter the name of the man discharged on Form 164A and forward Form 164A, together with two of the certified copies of the order of discharge, to the mobilization camp, will make the necessary entries to complete Form 164A and will thereupon give the local board credit on its net quota for one drafted man.

National Headquarters.—Those who have followed the work of the association during the past year will fully realize the necessity for the continuation of national headquarters. The necessary funds for the maintenance of an office and a stenographer will be available, and, if the next convention is held in a city providing adequate accommodation for a commercial exhibit, no fear need be entertained for the future from the standpoint of finances. When the association has been incorporated in Washington it would seem desirable to move the offices there, too, and your secretary herewith recommends that such steps be taken as soon as practicable after the adjournment of the convention.

Committee Appointments.—Heretofore no policy has existed with respect to the continuous service of committees, and the various lines of endeavor have suffered thereby. As each incoming president assumed office the entire personnel of committees has changed even though their proceedings were incomplete and the studies unfinished. This method is certainly not conducive to efficiency, and the association has undoubtedly lost much of value by this shortsighted policy, not to mention the loss of interest of those who were so summarily displaced.

It is not often wise nor usually necessary to continue *all* the members of a committee from one year to another, but it is imperative that at least one member of each committee serve for two successive years. It is therefore recommended that in the appointment of the 1917 committees, at least one member be retained to preserve a continuity of effort.

President Elect.—Another improvement in our present methods would be accomplished by the nomination and election of a president elect each year. Many kindred organizations have adopted this plan, and it has worked most successfully. As now organized it is never known until almost the termination of the annual convention who is to become the next president, and as a result of this uncertainty the newly elected incumbent is totally unprepared for the responsibilities of the office, and at best has scanty time to utilize his energies for the benefit of the association. If a president elect were annually installed, the incumbent would have two years to formulate his policy and familiarize himself with the association affairs. Your secretary realizes that this change would necessitate a modification of the by-laws, but considers it of sufficient importance to merit immediate consideration.

SUMMARY

The year 1917 has been marked by the appointment of a secretary, the establishment of a permanent headquarters, and an entire revision of the business methods of the association. Progress has been rapid, and the organization is more widely known than ever before in its history.

Publicity has been constantly sought and bulletins published monthly.

The membership of the association has been slightly increased and few old members lost; the membership list has been revised and tabulated upon a visible index system.

The Bureau of Registration and Information, so long discussed, is now in working order prepared to meet any reasonable demands made upon it. The value and utility of this undertaking will be limited only by the amount of funds available for its maintenance.

The 1916 Proceedings were published in a volume which has received the hearty praise and commendation of a large number of prominent members. It is a book whose contents and appearance make it a most valuable addition to any library. The price of $1.50 has been fixed, at which price it may be purchased from headquarters.

An entire new business and accounting system has been adopted, placing our association in line with the policy so

strongly urged by it for accurate and standardized accounting methods. We are now in a position to close our books at the end of each calendar year, have them properly audited, and publish the report in the current transactions.

In all probability the association will have been incorporated before another year shall have passed. This legal procedure will guarantee us a definite standing in the country, and will enable us to build upon a firmer foundation.

In spite of almost unsurmountable difficulties, the preparations for the 1917 convention were carried to a most successful termination, and an exceedingly interesting and timely program arranged.

The exhibit of hospital supplies and equipment arranged this year is second only to that displayed in Philadelphia. It is regretted that more commodious quarters were not available and that those utilized were not better arranged, but honest effort was made to make the best of adverse conditions.

The estimate placed upon the American Hospital Association in the future will very largely depend upon the early adoption of a policy or standard of ethics which may be used as a guide for those who are honestly striving to improve the hospital situation in America. Our present haphazard course will sooner or later lead us upon the rocks unless a reliable compass is secured to direct us.

Since many of those who always have been with us are today upon the battlefield, the indulgence of those who are enabled to attend the convention this year is asked with respect to any modification of our constitution and by-laws which might be considered radical. The trustees have definitely passed upon this subject, and it is therefore hoped that only such modification will be proposed as will plainly expedite the business methods of the association.

The accounts show a healthy condition, and the funds are in sight to enable us to continue our present organization intact. Many extraordinary expenses had to be met this year in connection with the establishment of headquarters and the purchase of supplies.

The war will undoubtedly necessitate certain changes in long-established standards and customs. The withdrawal of 40,000 nurses from this country will require replacement by some means, and the prospect of turning out at once all third-year nurses is worthy of consideration. Some standards must be lowered and it is for us to discuss at this time the extent to which such modifications shall be carried. The shortage of interns and physicians will likewise require certain changes, one of which is the term of service for interns. Hospitals requiring a longer term than one year will be doing a distinct service to the country by changing the service to one year, particularly since the government will insist upon this as regards drafted men who are exempted.

The association now has a home and can be reached at all hours of the day by local and long-distance telephone. A collection of hospital reports, books of reference and information, price lists, catalogs, etc., are all available to those who pay us a visit. Correspondence is answered promptly and the interests of the organization are under watchful eyes every day in the year.

The complete change in personnel of important committees each year is not considered a wise policy, and is believed to work to the disadvantage of the association. This condition can be remedied by the continuation of one old member on each committee from year to year, so that at least one member shall serve two years.

Your secretary is heartily in favor of increasing the membership by any legitimate means, and is therefore urgently recommending the inauguration of a membership campaign for this purpose.

FINALLY

The administration of the affairs of the American Hospital Association has been a very great pleasure, and the most intense personal satisfaction has been accorded the writer in the accomplishment of every task that has been set before him. Throughout the year the president, officers, and trustees have directed and aided him in every endeavor, and any success that may have resulted is due more largely to their able service and counsel than to his own ability.

It was hoped that it would not be necessary for your secretary to enter the service of the government, but conditions have arisen which have caused the army to call upon all of military age, and the writer did not feel as though he could conscientiously decline to offer his services. Since accepting the present assignment, the business of the association has not suffered, and every spare moment has been devoted to its interests, and your secretary wishes to add the assurance that the association has in no way suffered on account of his assumption of added burdens.

Respectfully submitted,

WILLIAM H. WALSH, Secretary.

* * * *

Report of the Board of Trustees of the American Hospital Association, 1917

The board held three regular meetings during the year, and in addition acted upon a number of matters through the medium of the mail.

The individual members have been at all times in close touch with the secretary, so that he has had throughout the year the benefit of this counsel and advice. One additional meeting was called to act upon the matter of the exemption of interns from the selective service law, but, as favorable action was announced prior to the date set for the meeting, it was canceled on account of the close proximity of the date set for the nineteenth annual conference.

The following matters were considered or acted upon at the various meetings:

1. Appointment of secretary.
2. Incorporation of association.
3. District censors.
4. Official organ.
5. Cooperation of the Bureau of Standards and Supplies.
6. Organization of sections.
7. Delegates.
8. Life membership.
9. Accounting system and business procedure.
10. Publication of transactions.
11. Commercial exhibit.
12. Bureau of Information and Registration.
13. Delinquent members.
14. Publicity.
15. Campaigning for new members.

APPOINTMENT OF SECRETARY

At the first meeting of the trustees, careful estimates were made of the cost of maintaining a permanent secretary with headquarters. It was found that the funds were adequate to meet those expenses, and the board therefore, in accordance with the desires of the association, engaged the full time of your secretary, Dr. William H. Walsh, and authorized the rental of a suitable office for headquarters.

The value of this procedure was immediately apparent. The secretary devoted himself to the organization of a real business office, the scope of the association's possible activities became much wider, and the tremendous power for good of the association was made available. It is for the association to name the secretary as one of the most important officers, but the trustees are confident that the members will appreciate the value of a man thoroughly interested in our work and enthusiastic and energetic in following it up.

INCORPORATION

The present trustees have accepted without protest responsibility for the actions of the association, financial and otherwise, but the attention of the membership is invited to the necessity for immediate incorporation. The subject has had the very studied attention of your board, which unanimously agrees that steps should be taken at an early date to incorporate. The laws of various states have been scanned with the object of selecting the one whose laws were most liberal, but it was finally deemed expedient to urge incorporation in the District of Columbia, and we now submit this conclusion as a definite recommendation.

DISTRICT CENSORS

In order to provide further safeguards to prevent the admission of undesirable persons to our membership, it was decided to inaugurate a system of censorship under the auspices of the secretary.

It is the opinion of your board that the appointment of a district censor for each state in the Union, each province of Canada, one for Australia, one for Honolulu, and one for the Philippines will not only serve the purpose indicated, but will create a body of interested members whose interests will also be constantly stimulated by a constant touch with the affairs of the association.

OFFICIAL ORGANIZATION

At the eighteenth annual convention a motion introduced by Mr. R. R. Ross upon the subject of the adoption of THE MODERN HOSPITAL as the official organ of the association was referred to this body for a report at this convention.

Your board must confess that, although the subject has been discussed at each meeting, no decisive conclusions were reached. It is a subject of vital importance and one that, we believe, cannot be decided this year. An official organ would in many ways be extremely advantageous to our association, and yet such a step cannot be taken until some financial arrangement is made regarding the subscription price.

It would be manifestly impossible for the publishers to give the journal free of charge, and on the other hand the dues that are now paid fall far short of supporting the organization. It would seem to your board that until the association decides to increase the annual dues to a figure that will meet the annual expense plus the cost of subscription it would not be wise to offer any definite recommendation.

The board recognizes that the cost of membership in addition to the cost of attendance at meetings is a considerable item for many of our members, and believes it important to encourage both membership and attendance, yet perhaps some method may be devised whereby a considerable proportion of the membership may become subscribing members so that an arrangement may be made with THE MODERN HOSPITAL which shall be mutually advantageous.

BUREAU OF STANDARDS AND SUPPLIES

Recognizing the many advantages of association with a centralized purchasing agency, your board, through its secretary, has approached the New York bureau with the object of learning the extent to which that organization would cooperate with us. Unfortunately, but little progress can be here reported. However, the whole subject of centralized group purchasing is being studied, and, if no further progress is made with the agency already existing, your board will consider the possibility of establishing a more national agency under its own auspices. Our investigations already indicate that the service now rendered by the Bureau of Standards and Supplies to its membership could be made available to all our members at a very small cost.

ORGANIZATION OF SECTIONS

Some confusion has resulted since the adoption of Article VI of the constitution, providing for the establishment of sections. It was hoped that this provision would meet a dual purpose, namely, the organization of affiliated bodies and the division of our program into departments. After due consideration it is now thought best to recommend the elimination from the paragraph of so much thereof as refers to geographic divisions and to provide therein only for divisions for the conduct of scientific business. As the insertion of another article providing for affiliated organization is inseparably linked with the formation of a house of delegates, it is considered unwise to introduce it at this meeting during the absence of so many of our members.

HOUSE OF DELEGATES

We believe that within a few years we shall be enabled so to reorganize the association as to make it a central body composed of state, territorial, and geographic units, but until that time arrives we cannot recommend the formation of such a body. It is our intention to aid and encourage the organization of geographic units throughout this country and Canada in every way possible, and any association of hospitals contemplating such organization will be supplied by us with a copy of standard constitution and by-laws. We shall also be glad to include in the bulletin of the association any items of interest that may be submitted by local associations.

LIFE MEMBERSHIP

When it is considered that the moderate sum of fifty dollars was adopted for life membership, it is a great surprise that more of our members have not grasped the opportunity to enter this class of membership.

It is our opinion that the sum of one hundred dollars should be charged for active life membership and fifty dollars for associate membership. It does not require a mathematician to determine that if every member would now become a life member at $50, the interest on the proceeds would not support the association.

ACCOUNTING SYSTEM AND BUSINESS PROCEDURE

Without charge to the association, an expert accountant has assisted in outlining a more suitable system of accounting than has been heretofore used, and it is hoped that it will be in working order within the near future. The new check book is now in use, and a sum of money transferred to the checking account under the supervision of the treasurer. When the entire new system is working, the treasurer will have been relieved of all routine work, without in any way encroaching upon his responsibility for the safeguarding of the funds.

DESCRIPTION OF SYSTEM

Income.—(a) from dues; (b) from membership lists and other literature, etc.; (c) from the commercial exhibit in connection with the convention (this will occur during a brief period of about six months); (d) disbursements, largely by treasurer from his own outside separate address—including regular payroll, and all bills except small and irregular items; this latter going through the office under a petty cash voucher system. All revenues, irrespective of amount, to be deposited in the selected depository and the treasurer to be advised of the deposit on a regular form and to acknowledge receipt to the office.

THE COURSES AND FORMS RELATING TO DUES

Bill for annual dues: On a 3 by 5 card with name and address on same for use in connection with the "window" envelope (Form A) when bill is received with remittance simply receipt and remail to member in another "window" envelope.

A loose-leaf cash book, in which pages are numbered: Moore system can be used to enter daily any descriptive form of such items (Form B). Then the payment of dues shall be entered on the ledger form of the member paying the dues (Form C).

The payment in check, money order, or cash is then deposited in the bank, and the treasurer is notified, who makes acknowledgment on special form sent him by the office (Form D).

The office shall maintain an independent account of its own—a petty cash account—for small and miscellaneous disbursements, such disbursements to be on a voucher system and give amount maintained. When this amount has been determined, then the treasurer aids in maintaining it on the vouchers received, all of which should be signed by the person receiving the money and the secretary or some one designated by him (Form E).

The purchase order form shall be used for purchases, orders, supplies, etc., and made out in triplicate on the typewriter in one operation. The original (or white sheet) is sent to person of whom goods are ordered; the first carbon copy (or blue sheet) is sent to treasurer as evidence to check with bill when it is received; the second or final carbon copy (or buff sheet) to be retained at the office as evidence and for reference to "check up" when order is filled (Form F).

A weekly and monthly financial statement is to be drawn weekly and monthly by the office on a triplicate typewriter form in one operation. The original copy (or white sheet) is sent to the treasurer; the first carbon copy (or blue sheet) to the president or to finance committee; the second or final carbon copy (or buff sheet) to be retained by the office. This will insure all responsible interests keeping in close and intimate touch. It permits the prompt correction of any error. It allows all to act in closer unison in event of outside criticism, and to assist the secretary in the annual audit, the monthly statement to include all within its period, even supplying weekly records (Form G).

PUBLICATION OF TRANSACTIONS

While the cost of the transactions was somewhat high, your board is satisfied that the quality of the paper, type, and general work are a marked improvement upon previous issues. As had undoubtedly been observed, a number of changes have been adopted which it is hoped will be continued. For instance, instead of printing the constitution and by-laws in the front of the book, these have been placed in the back. The list of previous conventions, with names of past officials, has been rearranged. The title has been so printed on the back as to make it plainly visible when the book is standing upright upon a shelf, and finally the price at which the volume is sold is plainly indicated. The grade of paper selected has very greatly enhanced the value of the book.

It is regretted that the transactions were not published at an earlier date, but many obstacles intervened to delay it. Both the president and the secretary reported difficulty in obtaining replies from members. For this reason the committee appointments were not settled until a late date, and some of the papers, sent to authors for correction and revision, were not received until the transactions went to press.

This year the board has endeavored to anticipate these annoyances by requesting all authors to supply a copy of their papers to the secretary in advance of the convention, and it is our hope that the Nineteenth Annual Transactions will be in the mail by March 1 at the latest.

Another matter concerning the transactions that received our attention was that of the free distribution of extra copies. In our present financial condition it is impossible to distribute these volumes free of charge, and a resolution was therefore adopted directing the secretary to plainly print upon each volume the price of $1.50, and to charge this amount to all who wished to subscribe for it.

COMMERCIAL EXHIBIT

The splendid exhibit displayed at Philadelphia provided the means by which your board was enabled to engage a secretary and maintain national headquarters. It is hoped that every member will fully realize this and in doing so remember that there rests upon each of us a definite obligation to treat the exhibition with fairness. In recognition of the value of these displays, the president has so arranged the program as to allow ample time for all to inspect carefully the many interesting exhibits of hospital supplies and equipment. Every member is earnestly solicited to allot at least one hour to the careful scrutiny of the commercial exhibit.

BUREAU OF INFORMATION AND REGISTRATION

No innovation in the history of the association has been of greater moment to its members than the inauguration of this bureau. Of course, it is only in its infancy, and much remains to be accomplished before the plans formulated will have been consummated, but enough has already been done to assure confidence in the assumption that this service alone will prove an attractive inducement to those contemplating joining the association.

It is the hope and wish of your trustees that there shall be assembled at the national headquarters a comprehensive reference library covering every activity that even remotely affects the hospital world. The collection of hospital reports already listed affords a valuable reference library, and we believe it will be possible and practicable to publish within a few years an annual hospital guide, in which might be correlated all information of interest regarding every hospital in America. The demand for such a book is very great, and its publication by the association would become a source of income.

The registration activities have gradually increased until it became necessary to restrict the work to the registration of executives only, and this restriction will have to continue until our treasury will permit the engagement of more clerical help. Requests have poured in for nurses, interns, engineers, pharmacists, and even laundresses, until the secretary was compelled to report his inability to supply requests. The bureau solicits the cooperation of

every member, not only in making known vacancies, but also in urging those seeking positions to communicate with the office. Superintendents, principals of training schools, dietitians, and housekeepers can usually be supplied upon short notice, but it is always requested that, before accepting an applicant, independent investigations be made in order doubly to assure the responsibility and capability of the applicant. It is clear that the association cannot guarantee the qualifications of either party when it acts as agent, although it will endeavor to list only those who conform with its own high standard.

DELINQUENT MEMBERS

We can conceive of nothing that would cause more surprise to those who methodically pay their dues from year to year than the publication of the list of delinquents. It is difficult to understand why those whose responsibility is unquestioned will ignore every communication regarding dues and deliberately permit themselves to fall in arrears. We believe some method will have to be adopted whereby a penalty shall be assessed when dues fall behind more than one year. To cover this matter, the recommendation is made that a penalty of 10 percent shall be imposed upon all dues remaining unpaid at the termination of the annual convention. This recommendation will be presented in the form of an amendment to the laws.

PUBLICITY

The trustees authorized the secretary to publish in suitable mediums such items of interest to members as might be available. In order to avoid the possibility of any suspicion of favoritism toward any special publication, it was expressly stipulated that such bulletins were to be given out to any respectable journal with sufficient bona fide circulation to warrant the expense entailed. This body has no means at this time of knowing the effect produced by the bulletins that have already appeared, but it is our opinion that a favorable impression has been created. Those matters discussed by the trustees at the various meetings were duly chronicled and those members sufficiently interested were enabled thereby to keep in touch with our proceedings. It is our intention to continue this feature, gradually enlarging its scope and usefulness.

CAMPAIGN FOR NEW MEMBERS

This subject was introduced by the secretary after a strenuous attempt had been made to secure new members by means of letters. To those of us who had seen the abuse of the "whirlwind campaign," the idea of adopting such a plan did not at first make a strong appeal. The matter was considered, however, from every possible angle, until your board became convinced of the feasibility of the plan under proper auspices and subject to such limitations as might be imposed by the board. The secretary was directed to explain the scheme in detail, and it was agreed to submit the project to the association with a favorable recommendation.

The trustees believe that a new era in the work of the association is developing. The meetings of the board have been too few and too short to accomplish all that it seems quite possible to accomplish. Yet it is better to make haste slowly, and the representatives of this widely spread organization must be proportionately widely scattered, so that meetings are costly in time as well as in money. Moreover, many of our people are devoting themselves to the immediate problems of these strenuous times, and men and women who have been among our leaders are giving their time to patriotic service, both at home and abroad, and it is well to await a time when their good counsel can again be fully available and peace shall bring a more confident view of the problems of the future.

The association was a powerful factor in the solving of the problem of the draft of medical students. Some of our leading men devoted themselves to the question, and the cooperation of our representatives all over the country made rapidly possible by our new organization brought the desired results.

Other problems will arise, and the knowledge and experience of the members of this organization should be put to service for the public welfare. We look forward to an important year's work, thanking those who have willingly helped when called, and assured always of hearty aid in all good works in the future.

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Names of Those Who Registered at the Bureau of Information During the Cleveland Meeting

Not all of those who attended the nineteenth convention of the American Hospital Association registered. The following is a list of those who left their names in the Bureau of Information conducted by THE MODERN HOSPITAL:

(A., active; Ap., application; As., associate; E., exhibitor; G., guest; L., life; P., prospective.)

Armstrong, Victoria E..A..City Hosp., Washington, Pa.
Alward, W. L.....E..Simmons Co., Cleveland
Aikens, Charlotte.....G..Detroit
Ashbel, Mrs. Carey....G..Salem
Aarsrud, Gena K.....A .Fairview Hosp., Minneapolis
Agnes, Sister.....G .Charity Hosp., Cleveland
Alderson, Mrs. Dr.....G..Dubuque, Ia.
Alderson, Dr. James...A .Findley Hosp., Dubuque, Ia.
Allen, Miss Bertha W...A .Huron Rd. Hosp., Lowell, Mass.
Anderson, J. K.....G
Applegate, Miss.....E .Gowanda State Hosp., Collins, N. Y.
Armbruster, E. J.....E..Nat. Marking Mach. Co., Cincinnati
Ashton, Miss.....E..Republic Mfg. Co., Cleveland
Anisfield, John.....A..Cleveland
Alicia, Sister.....G..Academy Lady of Lourdes, Youngstown, O.
Altschul, D. S.....A..Bronx Maternity Hosp., New York City
American Laundry
Mach. Co.....E..Cincinnati
Automatic Electric Co...E..Chicago
Ancker, Arthur D.....A..City and County Hosp., St. Paul, Minn.
Anderson, Dr. Albert..A..State Hosp., Raleigh, N. C.
Ayers, N. F.....G..E. W. Marion Co.
Amadus, Sister.....G..Charity Hosp., Cleveland
Agnes, Sister.....G..St. Mary's Hosp., Clarksburg, W. Va.
Avita, Sister.....G .St. John's Hosp., Cleveland
Appel, Katherine.....A..Howard Hosp., Philadelphia

Brown, Miss Ethel L...G..City Hosp., Akron, O.
Bayer, Olive .. ..G..University Hosp., Kansas City, Mo.
Bassett, Mrs. J. L.....G..General Hosp., New Britain
Bates, F. O.....A..Roper Hosp., Charleston, S. C.
Beers, Miss Mollie.....A..Cambria Hosp., Johnstown, Pa.
Binger, Miss M. L.....A..Woman's Hosp., Detroit, Mich.
Black, Dr. C.....G..Isolation Hosp., Toronto, Ont.
Borden, Richard P.....A..Union Hosp., Fall River, Mass.
Boysen, A. W.....E..Coast Products Co., St. Louis
Brigid, Sister .....A..Charity Hosp., Cleveland
Browning, Miss .....A..St. Clair Hosp., Cleveland
Buse, Miss Alice E.....A..Corry Hosp., Corry, Pa.
Butterfield, C. L.....A..Martin's Ferry Hosp., Martin's Ferry, O.
Bishop, Mrs. H. E....As..Sayre, Pa.
Bolt, Dr. ... .Cleveland Hosp. Council
Born, Henry G .....E .Born Steel Range Co., Cleveland
Bostwick, H. J.....As .Clifton Springs Sanatorium, Clifton Springs
Bradley, J. H .....E .Philadelphia
Barnaby, Miss M. D...A .Heywood Memorial Hosp., Gardner, Mass.
Bacon, Asa S.....A..Presbyterian Hosp., Chicago
Bailey, Jr., Geo.....A .Cooper Hosp., Camden, N. J.
Bailey, Miss Sarah H..G .West Chester, Pa.
Baldwin, Dr. L. B.....A..University Hosp., Minneapolis, Minn.
Bates, C. E.....E..Philadelphia
Birtch, F. W .....A .San Francisco
Bishop, H. E.....Robert Packer Hosp., Sayre, Pa.
Beecher, Bertha .....G..Cincinnati
Bond, Chas. R .....E..New York City
Bush, Gertrude .....G..Cleveland
Botdorf, H. E.....G..Stanley Supply Co., New York City
Bonaventura, Sister...G..St. Joseph's Hosp., Pittsburg
Baxter, Edward J.....G..Cleveland
Ball, Dr. Otho F.....L .THE MODERN HOSPITAL, St. Louis
Bunch, Marie .....G .Kansas City, Mo.
Brothertson, Geo. T...E..Philadelphia
Bunn, Fred S.....A .Youngstown Hosp., Youngstown, O.
Becker, Ada .....G..Lima, O.
Bacon, Mrs. Asa .....Presbyterian Hosp., Chicago
Burlingham, Dr. L. H. A..Barnes Hosp., St. Louis

Binkley, Miss .....G Canton, O.
Buford, Louise .....G Lucas County Gen. Hosp., Toledo, O.
Bailey, Dr. Wm. L.....A Lakeside Hosp., Cleveland
Bassitt, Geo. B.....A Buffalo
Baldwin, L. F.....G Massillon, O.
Baxter, Miss Caroline..G New York City
Bailey, Dr. Wm. T.....G Lakeside Hosp., Cleveland
Brooks, Miss A. M.....G Lakewood, Hosp., Lakewood, O.
Becker, Ray .....G THE MODERN HOSPITAL, St. Louis
Bauernfeind, Rev. J. H.A Deaconess Society Hosp., Chicago
Bauernfeind, Howard...G Deaconess Society Hosp., Chicago
Baxter, Donald E.....A THE MODERN HOSPITAL, New York City
Butler, Dr. Alice.....G Cleveland
Butler, Charles .....A New York City
Behrens, P. W.....A Toledo Hosp., Toledo, O.

Carmel, Sister .....G Pittsburg
Chrysostom, Sister....G Charity Hosp., Cleveland
Clark, Miss A. F.....G Lakewood, Hosp., Lakewood, O.
Collins, Mrs. H. O.....G Minneapolis, Minn.
Collins, Richard.....G Minneapolis, Minn.
Campbell, Dr. A. D.....G Glenville Hosp., Cleveland
Clark, Paul L.....G Huntsburg, O.
Clark, Mrs. L. D.....G Huntsburg, O.
Cooss, Mrs. W. N.....G
Chapman, F. E.....A Mount Sinai Hosp., Cleveland
Clementine, Sister....G Mercy Hosp., Canton, O.
Carmelita, Sister.....G Charity Hosp., Cleveland
Columba, Sister .....G Charity Hosp., Cleveland
Caley, Fred H.....G Cleveland
Carmody, E. L.....E Pittsburg
Chapman, W. L.....E Rutherford, N. J.
Clark, C. R.....E Providence, R. I.
Collins, Miss Elizabeth..A Long Branch, N. J.
Cowles, Miss A. B.....A St. Louis Mat. Hosp., St. Louis
Curry, Miss M. J.....As Rockford, N. Y.
Camilla, Sister .....A St. Ann's Hosp., Cleveland
Camp, Dr. F. K.....A Wesley Hosp., Oklahoma City, Okla.
Camp, Mrs. F. K.....G Wesley Hosp., Oklahoma City, Okla.
Castelaw, Dr. R. E.....A Kansas City, Mo.
Clark, Pliny O.....A Ohio Valley Gen. Hosp., Wheeling, W. Va.
Clark, Mrs. P. O.....G Wheeling, W. Va.
Clark, E. H.....E Heidbrink Co., Minneapolis, Minn.
Clemo, Irene .....As Kalamazoo, Mich.
Cleland, Alice C.....A Cooley-Dickinson Hosp., Northampton, Mass.
Coleman, Miss Laura..A Homeopathic Hosp., Buffalo, N. Y.
Coleman, Louise.....A Good Samaritan Hosp., Boston
Colletta, Sister.....A Charity Hosp., Cleveland
Collins, H. O.....A City Hosp., Minneapolis, Minn.
Conley, Dr. Walter....A Metropolitan Hosp., New York City.
Conn, H. L.....E Horlick Malted Milk, Racine, Wis.
Cowan, S. H.....E Stanley Supply Co., New York City
Chappell, Miss Frances.A St. Luke's Hosp., St. Louis
Crain, Jr., G. D.....As Hosp. Management, Chicago
Christianson, Miss J.A..A Northwestern Hosp., Minneapolis, Minn.
Crowell, H. C.....E Republic Mfg. Co., Cleveland
Cummings, Miss A.....L C. H. Buhl Hosp., Sharon, Pa.
Crew, E. R.....A Miami Valley Hosp., Dayton, O.
Cooper, Lenna .....G Sanitarium, Battle Creek, Mich.
Carter, H. K.....G THE MODERN HOSPITAL, New York City
Cogan, Dr. J. E.....G Cleveland

Dikensen, Mrs. E. M...A Women's Hosp., Detroit
DePeltquestanque,
Estaine .....G Massillon, O.
Dann, Miss E.....G Painesville Hosp., Painesville, O.
Dail, Mrs. C. A.....G Cleveland
Dice, Clara R.....Lakeside Hosp., Cleveland
Day, Miss S. E.....G City Hosp., Cleveland
DeGolyer, Earl A.....E Genesee Pure Food, LeRoy, N. Y.
Deaconess Society.....A Chicago
Dundas, Ethel B.....A Rochester Gen. Hosp., Rochester, Pa.
Drew, C. A.....A Wooster City Hosp., Wooster, O.
Dretzka, Dr. L. J.....A City Receiving Hosp., Detroit
Dorothy, Sister .....G Charity Hosp., Cleveland
Dolores, Sister.....G St. Augustine Convent, Cleveland
DesJardins, Clara.....As New Britain, Conn.
Denton, Emily.....A General Hosp., Saranac Lake, N. Y.
Davis, Jr., Michael M..A Boston Dispensary, Boston, Mass.
Davis, Harriett.....A Cleveland
Davey, A. F.....E Capital City Dairy Co., Columbus
Darlington, Laura.....A Johnston-Willis Sanat., Richmond, Va.
Dale, Bessie F.....A Clymer Miner's Hosp., Dixonville, Pa.
Dakin, Florence .....A Middletown Hosp., Middletown, O.
Dougherty, Dr. Jno. E..A Brooklyn
Deaver, Mary F.....As Cincinnati
Davies, D. H.....G Milwaukee
Dickman, Miss E.....G Cleveland
Dympna, Sister.....G St. Joseph's Hosp., Pittsburg
Diack, A. W.....E Detroit
Donet, Mrs. Elizabeth..As Memorial Hospital, Mt. Pleasant, Pa.
Dolores, Sister.....Lourdes Academy, Youngstown, O.

Ericson, F. H.....E Chicago
Emerson, Miss Stella..E Genesee Pure Food Co., LeRoy, N. Y.
Everston, Jos. H .....E Chicago
Everingham, Arvill A...A Rome, N. J.
Eitel, Mrs. Geo. B.....A Eitel Hosp., Minneapolis, Minn.
Erickson, Carl A.....G Chicago
Eisen Co., Wm. M.....E New York City
Ethelrite, Sister.....G Charity Hosp., Cleveland
Eileen, Sister.....G St. John's Hosp., Cleveland
Echois, Miss M. C.....G City Hosp., Massillon, O.
Essig, Anna K.....A Coatesville Hosp., Coatesville, Pa.
Evelyn, Sister..... St. Elizabeth Hosp., Youngstown, O.

Franz, A. J.....A Presbyterian-German Hosp., Cleveland
Friedman, Nina D.,
R. N. .....A Chicago
Fowler, Dr. J. W.....A City Hosp., Louisville
Ford Co., J. B.....E Wyandotte, Mich.

Fisher, Dr. Alex ... A General Hosp., Calgary, Alberta
Fuller, Blanche M ... A Omaha, Neb.
Frost, M. E. ... A Detroit
Fritschel, H. L. ... A Milwaukee
Friedman, C. A ... G Chicago
Fox, Mrs. M. S ... A Battle Creek Sanit., Battle Creek, Mich.
Fowler, B. M. ... A Vassar Bros. Hosp., Poughkeepsie, N. Y.
Ford, Clarence E ... Ap New York City
Fisher, F. N. ... L Chicago
Foster, Paul H ... Ap Oklahoma City, Okla.
Fesler, Mrs. Paul H.. G Oklahoma City, Okla.
Fengel, S. S. ... G
Faust, A. L. ... E Nat. Marking Mach. Co., Cincinnati
Fidelis, Sister ... G Charity Hosp., Cleveland
Floyd, Miss ... G Cleveland
Ford, A. L. ... A Children's Hosp., Pittsburg
Fleming, Blanche K.....A Grove City Hosp., Grove City, Pa.
Fedeloa, Sister.....G Charity Hosp., Cleveland
Franz, Olga.....G E. 55th Street Hosp., Cleveland
Friend, Harriet S. P...G St. Luke's Hosp., Cleveland
Francina, Sister.....G St. Ann's Hosp., Cleveland

Graves, Lulu G.....G Lakeside Hosp., Cleveland
Gibson, Anna L.....As Huntington Hosp., Boston
Griffin, Rev. M. F.....A St. Elizabeth's Hosp., Youngstown, O.
Gonzaga, Sister.....G St. John's Hosp., Cleveland, O.
Giffen, E. C.....A Wellesley Hosp., Toronto, Can.
Garrison, Charlotte.....A City Sanatorium, Kalamazoo, Mich.
Goodman, Miss M.....A Boston
Gailey, Miss I. M.....A Conemaugh Valley Hosp., Johnstown, Pa.
Gary, Mrs. I. C.....G Chicago
Gary, Dr. I. C.....A Chicago
Genevieve, Sister.....A St. Elizabeth's Hosp., Youngstown, O.
Geraldine, Sister.....As St. Elizabeth's Hosp., Youngstown, O.
Gervasey, Sister Mary..A Hamilton, O.
Giles, Sister .....A Charity Hosp., Kansas City, Mo.
Gill, Mrs. C. A.....G Germantown, Pa.
Gill, Chas. A.....A Germantown Hosp., Germantown, Pa.
Gotlson, Dorothea.....As Swedish Hosp., Brooklyn
Gilmore, E. S.....A Wesley Memorial Hosp., Chicago
Goodman, Dr. M. C....A Cleveland
Golder, Louise.....A Bethesda Hosp., Cincinnati
Goodwin, H. C.....A Albany Hosp., Albany, N. Y.
Grace, Sister.....A Mercy Hosp., Hamilton, O.
Greene, Fred'k D.....As Associated Hosps., New York City.
Green, Mrs. Almida C..G Warren Hosp., Warren, Minn.
Gutwald, Katherine.....A Columbus, O.
Gwyer, Frederick.....A Lincoln Hosp., New York City
Galleri, Elizabeth A....A Reading, Pa.
Geffen, Mrs. Jos.....A Mt. Sinai Hosp., Philadelphia
Glidden, R. A.....E Beverly, Mass.
Gottesman, O. M.....E New York City
Goodkind, S. B.....G Toledo, O.
Gilberta, Sister.....St. Elizabeth's Hosp., Youngstown, O.

Hamilton, Mrs. S.....G Detroit
Howell, Thos. .....A New York Hosp., New York City
Hildreth, C. B.....A St. Luke's Hosp., Cleveland
Howell, Chas S.....G Formerly West Penn. Hosp., Pittsburg
Howell, Maud .....A Mary Lanning Hosp., Hastings, Neb.
Herrick, Dr. F. C.....G Hosp. Council, Cleveland
Hubbard, M. C.....A Ohio Valley Gen. Hosp., Wheeling, W. Va.
Hall, F. W.....E New York City
Hughes, Albert M.....E New York City
Hiper, Mrs. Gustave A..G Milwaukee
Henderson, John T.....A Grace Hosp., Cleveland
Harrison, M.....A Hamot Hosp., Erie, Pa.
Halverson, Josephine..Pr Port Huron Hosp., Port Huron, Mich.
Hamill, Nellie R.....A Hosp. of the Good Shepherd, Syracuse, N. Y.
Hamilton, Dr. S.....A Harbor Hosp., Detroit
Hartry, Miss H.....A St. Barnabas Hosp., Minneapolis, Minn.
Hawley, C. J.....E Hammond, Ind.
Haworth, E. P.....A The Willows, Kansas City, Mo.
Heard, Thos. H.....A Victoria Hosp., London, Can.
Heard, Mrs. H.....G London, Can.
Hefferman, M. J.....E Hospital Management, Columbus, O.
Hemingway, Miss.....A Aultman Hosp., Canton, O.
Herbst, S. B.....E Albert Pick & Co., Chicago
Herman, Sister.....A Cleveland
Hirschfield, Dr. A.....Pr Hosp. Com. Bd. Char. & Cor., Minneapolis
Hoeppner, Mrs. E. H..A Dansville, N. Y.
Hoffman, Rev. Fr.....G German Hosp., Cleveland
Hofseth, Miss A.,
R. N. .....A Maple Crest Sanat., Whitelaw, Wis.
Hogle, Miss C. C.....A Huron Road Hosp., Cleveland
Hornsby, Dr. John A...L THE MODERN HOSPITAL, Chicago
Hortense, Sister.....G St. Elizabeth's Hosp., Youngstown, O.
Hilker, F. C.....A St. Johns Riverside Hosp., Yonkers, N. Y.
Hunt, N. E., R. N.....A Ellwood City Hosp., Ellwood City, Pa.
Hunter, Miss J. A.....A Grace Hosp., New Haven, Conn.
Hankins, Mrs. Bert....E Massillon, O.
Hart, W. O.....A Presbyterian Hosp., New Orleans, La.
Hayes, G. C.....E New Jersey
Hayser, Mrs. W. D....A Long Branch, N. J.
Heinreich, E. F.....E Pittsburg
Henessey, Berthold....A Jewish Hosp., Philadelphia
Holstrom, F.....E Chicago
Hope, Miss M.....A Babies' Dispensary, Cleveland
Hamilton, Alfreda....As Protestant Hosp., Columbus, O.
Hatfield, C. F.....G St. Louis
Hite, Mrs. Edward....G Martins Ferry, O.

Irene, Sister.....G Cleveland
Ivers, Margaret .....A Winnetka, Ill.
Isabel Sister.....A Charity Hosp., Cleveland

Jones, Rev. S. R.....As Willard Parker Hosp., New York City
James A. Mary.....A Grant Hosp., Columbus, O.
Jones, Miss J. L.....A South Side Hosp., Pittsburg
Joseph, Mother.... ...G Ottumwa, Ia.
Jeffrey, Miss A. T. ...A St. Christopher's Hosp., Philadelphia

Justina, Sister.....A..Charity Hosp., Cleveland
Johnston, Maud L.....A..Homeopathic Hosp., Rochester, N. Y.
Jackson, Mary C.....A..Graham Hosp., Keokuk, Ia.
Jones, M. F.....E..Buffalo Co-op. Stove Co., Buffalo, N. Y.
Johnson, J. E.....E..Am. Laundry Mach. Co., Cincinnati
Jones, M.....G..Institute Service Bureau, Battle Creek, Mich.
Jennings, Mrs.....G..Cleveland

Klausner, Alexander...E..Thorner Bros., New York City
Knapp, Miss M. M., R. N.....A..Overlook Hosp., Summit, N. J.
Kienle, Rev. C. A.....A..Emergency Hosp., Mansfield, O.
Kearney, John R.....E..Sanitary Specialties Co., Cleveland
Klunder, S. E.....G..Chicago
Keith, Mary L.....A..Rochester Gen. Hosp., Rochester, N. Y.
Kobylanski, J. F.....As..Cleveland
Keller, Lydia H.....A..Butte Deaconess Hosp., Butte, Mont.
Kippen, Miss A.....A..Albert Lea Hosp., Albert Lea, Minn.
Kraemer, Miss Elin....A..F. F. Thompson Hosp., Canandaigua, N. Y.

Lack, Harriet.....As..Grace Hosp., Detroit, Mich.
Lyons, Josephine.....G..Lima, O.
Lawrence, Sister.....
Larkins, Frances.....A..New York City
Lightner, J. E.....G..Plainsville Hosp., Plainsville, O.
LeBland, C. H.....A..Charity Hosp., Cleveland
Leggett, Margaret.....A..Bellefonte Hosp., Bellefonte, Pa.
Lewis, A. M.....A..Wichita Hosp., Wichita, Kan.
Linduff, Cora.....A..Dennison, O.
Lawson, Miss M. A....A..City Hosp., Akron, O.
Lindif, Frances J.....G..Green Point Hosp., Brooklyn
Lake, Amzi.....A..Masonic Home, Burlington, N. J.
Larsen, Lutie B., R. N....Decorah Hosp., Decorah, Ia.
Lee, Sarah A.....G..Chicago
Leichofer.....A..German Hosp., Cleveland
Leitch, Jenny.....G..Toronto, Can.
Lewis, Mary E.....As..German Hosp., Chicago
Loder, C. S.....As..30 Church St., New York City
Lohman, A. G.....A..Deaconess Hosp. (German) Cincinnati
Long, Miss E. J.....A..Mercer, Pa.
Loveland, F. A.....A..Corry Hosp., Corry, Pa.
Ludy, Mary B.....A..German Lutheran Hosp., Sioux City, Ia.
Lewis Manufacturing Co.....E..Walpole, Mass.
Lyon, E. H.....E..Life Saving Devices Co., Chicago
Lynn, H. R.....E..East Cleveland
Lutz, B. M.....G..Shenango Valley Hosp., New Castle, Pa.
LeFebvre, Miss T. H...A..City Hosp., Binghamton, N. Y.
Lauman, Anna.....A..Lutheran Hosp., Ft. Wayne, Ind.

MacAdams, Mrs. L. C..G..Cincinnati
MacLaren, Duncan....E..Powell & Giberson Linen Co., New York Cy.
MacLeod, Dr. N. M...A..Newport Hosp., Newport, R. I.
MacDonald, Mrs. J. J...G..Jersey City, N. J.
MacDonald, Miss C....A..Maternity Hosp., Cleveland
MacEachern, M. T.....A..Vancouver Gen. Hosp., Vancouver, B. C.
McPhee, E. L.....G..Henry Ford Hosp., Detroit
McKisson, E. I.....E..Toledo, O.
McLaughlin, Anna.....A..Painesville Hosp., Painesville, O.
McKenna, Mary C.....A..St. Francis Infirmary, Charleston, S. C.
McMillan, Miss.....G..City Hosp., Lockport, N. Y.
McDill, Sister.....G..West Park, Pittsburg, Pa.
McArthur, Miss.....A..General Hosp., Stratford, Can.
McCarthy, A. W.....G..New York City
McConnell, Miss A....As..Roper Hosp., Charleston, W. Va.
McCullough, E. Grace...A..Peter Bent Brigham Hosp., Boston
McDonald, D.....A..Jersey City
McDonald, Mrs.....A..Jersey City
McElderry, Miss G. D..A..Hackley Hosp., Muskegon, Mich.
McGrath, Catherine C...G..Surgical Dept. Grace Hosp., Detroit
McKee, Gertrude D....A..Children's Hosp., Milwaukee
McLaren, Margaret....A..Emergency Hosp., Warren, Pa.
Mateer, Margaret B.....A..Lima Hosp., Lima, O.
Maggi, M. Bell.....Pr..Barberton Citizens' Hosp., Barberton, O.
Mariam, Sister.....G..Mercy Hosp., Canton, O.
Mackinney, Lydia.....A..Shenango Valley Hosp., New Castle, Pa.
Margaret, Sister.....G..Charity Hosp., Cleveland
Matheson, Jessie.....G..Brockton, Mass.
Metropolitan Hospital Supply Co.....E..New York City
Morrison, H. D.....E..New Castle, Pa.
Miller, Elizabeth F....A..Polyclinic Hosp., Philadelphia
Mitchell, A. H.....E..Philadelphia
Morris, M.....E..New York City
Morritt, Walter.....A..Colorado Springs, Colo.
Moss, Dr. H. J.....A..Hebrew Hosp., Baltimore
Mace, Miss F.....A..Welland County Hosp., Ontario, Can.
Musgrave, Dr. W. E..A..Children's Hosp., San Francisco
Mauney, J. H.....A..Lincoln Memorial Hosp., Knoxville, Tenn.
Marshall, Mary E....G..Battle Creek, Mich.
Martin, Miss C. L....A..Columbia Hosp., Milwaukee
Massey, Dr. V. E.....G..General Hosp., Knoxville, Tenn.
Middleton, Mary A....A..Philadelphia
Miller, Elizabeth.....A..General Hosp., Dover, N. J.
Millman, Bessie M....A..Orange Memorial Hosp., Orange, N. J.
Milne, Mrs. T.....A..Welland County Hosp., Ontario, Can.
Mitchell, Miss A.....G..Albany, N. Y.
Moore, Lucy M.....A..Knickerbocker Hosp., New York City
Moore, Mrs. Helen Despeder.....A..City Hosp., Jackson, Mich.
Morvart, Sarah M.....A..Indiana Hosp., Indiana, Pa.
Morrow, Jos. R.....A..Bergen County Isolation Hosp., Oradell, N. J.
Mohler, Dr. H. K.....A..Jefferson Hosp., Philadelphia
Monagle, A. C.....E..Franco-American Food Co., Jersey City
Moulder, J. McLean..A..Bethany Methodist Hosp., Kansas City, Kan.
Moyer, Katherine.....A..Pottstown Hosp., Pottstown, Pa.
Mueller, Vincez.....As..THE MODERN HOSPITAL, Chicago
Murphy, Miss C., R. N..A..Toledo, O.
Maus, Bessie H.....A..Wellsville Hosp., Wellsville, N. Y.
Metzenbaum, Dr. M...G..The Rose Bldg., Cleveland
Mott, C. S.....G..THE MODERN HOSPITAL, Chicago

Massecar, Miss.....G..City Hosp., Cleveland
Marthan, Esther.....G..Painesville, O.

Nye, Judge C. H.....A..Painesville, O.
Neer, Dorothy.....G..Robinwood Hosp., Toledo, O.
Napier, Mrs. S. J.....A..City Hosp., Springfield, O.
Nealley, W. G.....A..Brooklyn Hosp., Brooklyn
Nesbitt, Dr. E. M....As..Detroit
Nord, Sister.....G..Chicago
Newman, W. Maud....A..Sewickley Valley Hosp., Sewickley, Pa.
Nealey, C. E.....E..Cleveland
Noback, Gustave J....G..Chicago

Owsley, E. F.....As..Youngstown, O.
Ordway, Clarence S...A..East Side Hosp., Toledo, O.
Olsen, Dr. E. T.....A..Englewood Hosp., Chicago
Olmstead, Dr. Theo....A..Merritt Hosp., Oakland, Cal.
Oberholtz, Miss.....As..Allentown Hosp., Allentown, Pa.
Ohlman, Margaret....As..Wilkesbarre, Pa.
Oberg, C. I.....A..Sherman Hosp., Elgin, Ill.
Overstreet, Miss C....G.."Hospital Management," Chicago
Olson, Sister.....G..Deaconess Home and Hosp., Chicago
Osborn, Madge G.....G..Cleveland

Patronilla, Sister.....G..Charity Hosp., Cleveland
Patrick, Mother.....G..Our Lady of Lourdes Academy, Cleveland
Patricia, Sister.....G..Charity Hosp., Cleveland
Patton, Miss Arvilla...A..New Brighton, Pa.
Page, Dr. Henry F....A..German Hosp., Philadelphia
Paul, Dr. L. J.....G..City Hosp., Cleveland
Payne, R. A.....E..New York City
Peters, John M.....A..Rhode Island Hosp., Providence, R. I.
Phillips, M. L.....A..Burlington Hosp., Burlington, Ia.
Phillips, Mrs. G. E....G..Detroit
Phillips, Geo. E.....A..Municipal Hospital, Detroit
Portras, Sister.....A..Hamilton, O.
Pratt, M. R.....A..University Hosp., University, Va.
Purcell, Sister.....A..Superior, Toledo, O.
Packard, Dr. S. B.....A..Brockton Hosp., Brockton, Mass.
Peck, Miss C. B.....A..General Hosp., Ashtabula, O.
Pine, Miss Emily.....A..R. S. Frost Hosp., Chelsea, Mass.
Purvis, Joseph.....A..West Suburban Hosp., Oak Park, Ill.
Pound, Clara B.....A..Reid Memorial Hosp., Richmond, Ind.
Potts, Florence.....A..Children's Hosp., Toronto, Can.
Parker, Harriet.....A..Kensington Hosp., Philadelphia
Peskind, Dr. A.....E. 55th Street Hosp., Cleveland
Parrish, N. F.....A..City Hosp., E. Liverpool, O.
Pace, Eva.....G..Cleveland
Palmer, Mrs. M. E....G..Eddy Road Hosp., Cleveland
Prindiville, K. M.....A..Jos. Lawrence Hosp., New London, Conn.
Pringle, J. A.....A..City Hosp., St. Louis
Parker, Dr. G. A.....A..Pottsville, Pa.
Peterson, B. W.....A..Ohio Valley Gen. Hosp., Wheeling, W. Va.

Quayle, Dr.....G..Cleveland

Raquat, Caroline.....G..Bedford, O.
Rosenberg, Ethelyn....G..Cleveland
Rockwood, Dr. H. L...G..Warrensville Sanatorium, Warrensville, O.
Russell, Miss M. M....G..Cincinnati
Rosemary, Sister.....G..St. John's Hosp., Cleveland
Rayeur, Katherine....G..Med. Medicochi, Philadelphia
Rogers, Margaret.....A..Jewish Hospital, St. Louis
Rothwell, Katherine...A..City Hosp., Winston-Salem, N. C.
Read, O. R.....E..Read Mach. Co., York, Pa.
Read, Mrs. O. R.....
Reardon, Elizabeth....A..Ohio Valley Gen. Hosp., McKee's Rocks, Pa.
Robertson, Dr. John...E..Jaeckh Mfg. Co., Cincinnati
Randles, C. R.....E..Randles Mfg. Co., Ogdensburg, N. Y.
Ransom, John E.....A..Central Free Dispensary, Chicago
Ransom, Marie H.....G..Social Service Cent. Free Dispensary, Chicago
Reardon, J. B.....E..Republic Mfg. Co., Cleveland
Robbins, Miss E. E....A..Batavia Hosp., Batavia, N. Y.
Robertson, Marie.....A..Jones Memorial Hosp., Jamestown, N. Y.
Roetger, Frederick....G..Wheeling, W. Va.
Romano, Sister.....A..St. Joseph's Hosp., Kansas City, Mo.
Rosenthal, Arthur.....E..Grand Rapids, Mich.
Riddle, Mary M.....A..Newton Hosp., Newton, Mass.
Rush, N. J.....E..Cincinnati
Raphael, H.....E..New York City
Roberts, Dr. R. J.....G..New York City
Roth, Mrs. J. E.....G..East End, Pittsburg
Rothschild, Leo.....E..New York City
Russell, C. N.....E..Borden's Malted Milk, New York City

Shepard, Linnie.....G..Lima, O.
Smith, Major Winford A.....A..Johns Hopkins Hosp., Baltimore
Spitzer, Mrs. Carl....G..Toledo, O.
Spies, Miss.....G..Painesville, O.
Stevens, Edw. F.....As..Architect, Boston
Smoot, J. M.....E..Pickens & Co., New York City
Scotland, Miss.....G..Grove City, Pa.
Smith, Wm. O.....E..New York City
Smith, Frances.....A..St. Luke's Hospital, Duluth, Minn.
Smith, Miss.....E..Cleveland
Surbray, Mary E.....A..Warren Hosp., Warren, O.
Schfies, Marie.....G..Cleveland
Stair, Blanch.....A..Eddy Road Hosp., Cleveland
Smythe, Miss E.....G..Women's Hosp., Cleveland
Simmon.....E..Cleveland
Siebrandt, J. R.....E..Kansas City, Mo.
Schmid, N. M.....E..Jas. H. Matthews Co., Pittsburg
Smith, Dr. Appleton W.....A..Hartford, Conn.
Schill, Anna M.....A..Hurley Hosp., Flint, Mich.
Schweder, Miss J. E...G..Bethesda Hosp., St. Louis
Scott, Kathleen.....A..Sparrow Hosp., Lansing, Mich.
Shaeffer, Mary.....G..Easton, Pa.
Shaeffer, Sister.....G..Easton, Pa.
Schoenhen, Marie M...G..St. Louis

Schulz, T. M.	A.	Milwaukee County Hosp., Wauwatosa, Wis.
Sexton, Dr. Louis A.	A.	Hartford Hosp., Hartford, Conn.
Siebert, Emma D., R. N.	A	Emanuel Hosp., Mankato, Minn.
Sinclair, Geo. Wm.	A	Winnipeg, Manitoba
Singer, Samuel	G	New York City.
Shattengren, Sister	A.	Bethesda Hosp., St. Paul, Minn.
Slayton, Ethelyn	G.	Minneapolis, Minn.
Smith, Mary A.	A	York Hosp. and Disp., York, Pa.
Stanislaus, Sister	G.	Wheeling Hosp., Wheeling, W. Va.
Stober, Geo. W.	E.	Columbus, O.
Storck, Mrs. H. D.	A	Women's Hosp., Buffalo
Strasser, C. Eugene	A	Jewish Hosp., Brooklyn
Sullivan, Rose B.	G	Detroit, Mich.
Shalvogle, J. J.	As.	Pittsburg
Schwidetzky, Oscar O. R.	E.	Rutherford, N. Y.
Smith, J. M.	A.	Muhlenberg Hosp., Plainfield, N. J.
Stone, Mary	A.	Hackensack Hosp., Hackensack, N. J.
Stone, Mrs.	G	Syracuse, N. Y.
Spalding, J. D.	G	Cleveland
Swarthout, Mrs. Edith	G.	Wellsville Hosp., Wellsville, N. Y.
Snyder, Grace	G.	Massillon, O.
Sawyer, C. E.	A.	Marion, O.
Skinner, J. O.	A	Columbia Hosp. for Women, Washington, D. C.
Shutt, C. H.	A	City Hosp. Commissioner, St. Louis
Stueber, Dr. F. G.	G	City Hosp., Lima, O.
Stimpson, W. D.	G.	U. S. Public Health Service, Washington, D. C.
Salexandrive, Sister	G.	Charity Hosp., Cleveland
Steinmetz, Rose K.	A.	Children's Hosp., Akron, O.
Sterns, Mrs. W. G.	G.	Cleveland
Southmayd	E.	Ohio State Dept. of Health, Cleveland
Toomey, John	A.	Mt. Sinai Hosp., Cleveland
Taylor, G. W.	G.	Painsville, O.
Thatcher, Alice	A.	Cincinnati
Test, Daniel D.	A.	Pennsylvania Hosp., Philadelphia
Towslee, Dr. L. G.	A.	Cleveland
Towns, Chas. B.	A.	Chas. B. Towns Hosp., New York City
Trafford, Mary C.	A.	Kalamazoo, Mich.
Thoma, Eugene G.	E.	New York City
Tinsley, Esther J.	A.	Pittston Hosp., Pittston, Pa.
Templeton, Nell J.	A.	Salem Hosp., Salem, O.
Thomas, Miss A.	G.	Rochester, N. Y.
Underwood, W. B.	E	Rochester, N. Y.
Van Slyke, Dr. E.	A	Women's Hosp., New York City
Viehdorfer, Alma M.	A.	Allentown Hosp., Allentown, Pa.
Veruke, D. J.	E	Grand Rapids, Mich.
Wilson, Caroline M	A	Supt. Franklin Hospital, Franklin, Pa.
Wagner, Lucca K.	A	Homeopathic Hosp., Reading, Pa.
Waldman, Henry J.	A.	New York, N. Y.
Webster, H. E.	A	Royal Victoria Hosp., Montreal, Can.
Weber, J. J.	As	New York, N. Y.
Warner, Regina	G	St. Gabriel Hosp., Little Falls, Minn.
Widmer, W. A.	E	J. B. Lippincott Co., Philadelphia
Whiting, Dr. A. D.	A	Philadelphia
Woodbury, Dr. W. E.	A.	New York, N. Y.
Walker, L. C.	E	New York, N. Y.
Walsh, Capt. Wm. H.		Secy. A. H. A., Philadelphia
Weber, Fred	A.	German Deaconess Home and Hosp., Chicago
Weinberger, T.	E.	New York, N. Y.
Weisenbach, Leo	E.	New York, N. Y.
Weintraub, G. Z.	E.	Cleveland
Wilson, Dr. R. J.	A.	New York, N. Y.
Wolcotte, Grace S.	A	Waterbury Hosp., Waterbury, Conn.
White, Regina	A	Milwaukee
Wright, Elizabeth	A	Rockford Hosp., Rockford, Ill.
Wright, Howell	A	Cleveland
Weber, Geo. T.	A.	Olney Sanatorium, Olney, Ill.
Weber, Bernard	G.	Olney, Ill.
Warner, Dr. A. R.	A.	Lakeside Hosp., Cleveland
Weaver, Olive M.	A	Home and Hosp., Findlay, O.
Weber, Mary	G.	Hastings, Neb.
Wilson, W. B.	A.	Rainbow Hosp., Cleveland, O.
Wilkes, P. C.	A.	Memorial Hosp., Memphis, Tenn.
Wait, J. Eurs	G	Superior, Superior, Neb.
Wahlstrom, M.	A	Y. M. C. A., Cleveland
Woodhouse, Miss M. P.	G.	St. Luke's Hosp., Cleveland
Waschura, Miss Mary	G.	St. Ann's Hosp., Cleveland
Wirtz, Stephen M.	E	Wolverine Mfg. Co., Detroit
Wood, A. L.	G	Henry Ford Hosp., Detroit
Yengsta, Edith E.	A	Carlisle Hosp., Carlisle, Pa.
Younglove, Anna	A	Elyria, O.
Yoke, Mary R.	E	Canton, O.
Young, Chas. H.	A	N. Y. Pres. Hosp., New York City

Dr. J. L. Eaton, who has recently assumed the duties of superintendent at State Hospital No. 4, Farmington, Mo., is inaugurating a policy of giving close attention to the physical as well as mental welfare of those under his care. Dr. Eaton started out by ordering larger quantities and a better quality of food for the 700 patients of the institution, who, he believes, were not being properly fed.

Contract was awarded at Girard, Kan., in September, for the erection of a community hospital.

The Establishment of a Department of Preventive Medicine in a Hospital Treating Children

Charles V. Dorwarth, M. D. (Arch. Pediat., 1917, XXXIV, No. 3), says that a hospital treating infants and children is not fulfilling its obligations if it takes care of them only when ill. A department of preventive medicine is just as rightfully a distinct unit of the hospital as the ward, the dispensary, or the pathological department. It should have a medical director at its head, with as many assistants as the work requires; interns assigned to it in rotation; and pupil nurses detailed to receive instruction in medicosociological work. Some of the important functions of such a department would be the establishment of a health clinic, a prenatal clinic, a social service department, a division of physical development, neighborhood educational work, a wet-nurse directory, etc.

The health clinic is a consultation where mothers may bring well children for examination and advice as to means for keeping them well. To this clinic will be referred children discharged from the wards and dispensaries, technically "cured," but with subnormal nutrition and lowered resistance; and there the problem of each individual child is studied and suggestions are given for bringing the child's general physical condition up to the highest efficiency. The health clinic's function should cover prophylaxis against such diseases as smallpox, whooping cough, and typhoid. The regular children's dispensary is too busy with sick children to give any attention to those apparently well; hence the necessity of the health clinic.

The prenatal clinic and the maternity out-patient service would be in charge of an obstetrician. There pregnant women would receive instructions in personal hygiene, a careful history being taken and a complete physical examination made; the patient should be kept under observation and referred to the proper dispensary for treatment of abnormal symptoms if any develop. Patients may be delivered at their homes by the intern to the department of preventive medicine, assisted by the nurse assigned to this department, under the supervision of the obstetrician in charge. A complete examination should be made two or three weeks after confinement for the discovery and repair of any injury incurred during parturition.

The chief function of the social service department is keeping former patients well and out of the hospital. The personnel may include teachers, lecturers, voluntary workers, clerks, clinical assistants, and dietitians. The work of the follow-up nurse is most important; she will visit the homes of patients, explain to the mother the physician's orders, and obtain data with regard to disease-producing conditions in the patient's environment. Convalescent care and summer outings will be provided by this department. The division of physical development should be in charge of a competent teacher of physical education. A gymnasium to give the subnormal a firmer muscular development may be among the activities of this division.

Among the miscellaneous work of the department of preventive medicine may be lectures on infant hygiene for parents, lectures on personal hygiene for expectant mothers, classes in infant care and hygiene for little girls, a club for boys to be trained as a neighborhood sanitary police force, detection by field workers of unlicensed baby farms, efforts to change the environment of children whose parents or guardians are unfit.

Miss Ann C. Barry has resigned the position of night superintendent at the Good Samaritan Hospital, Lebanon, Pa., to take up Red Cross work in Orange, N. J.

THE WAR: ITS HOSPITAL, MEDICAL AND NURSING ASPECTS

THE WAR PROGRAM OF THE UNITED STATES PUBLIC HEALTH SERVICE

Sanitation of Extra-Cantonment Zones—Demonstrations in Rural Sanitation—Various Forms of Cooperation With State Health Agencies—Bill for the Creation of a Sanitary Reserve

The work of the United States Public Health Service has assumed new importance and taken on several interesting phases due to the war. As a preliminary to more detailed accounts of some of this work, the following brief summary from the surgeon-general's office, under the signature of Assistant Surgeon-General W. C. Rucker, will be of interest:

"At the present time the work of the service is largely concentrated on the sanitation of the extra-cantonment zones, this work being performed in cooperation with state and local health authorities. Officers have been detailed to the communities and territory in immediate contiguity with military camps, and intensive health campaigns for the eradication of typhoid fever, malaria, dysentery, and other communicable diseases have been inaugurated. You can readily understand that, next to the sanitation of the camps themselves, this work is most important, as the soldier is fully as liable to contract disease outside of his camp as within. At all cantonments where this work has been instituted, the state health authorities have been advised with and are rendering valuable assistance; the same remark applies to the local health agencies. This phase of our work would of course make a story in itself.

"The demonstrations in rural sanitation work, which has now been considerably curtailed on account of the war, are conducted upon request of state health agencies.

"Other lines along which we are struggling in cooperation with state health agencies and for which they should receive as much credit as ourselves are the reporting of the incidence of disease, the determination of the quality of all water used on interstate carriers, in order to safeguard the health of the traveling public, and studies of the organization of municipal and state health bodies. The work of holding examinations for the selection of competent district and municipal health officers is really along this line. For example, California desired to obtain her district health officers from the United States at large, and we not only conducted the examinations therefor throughout the country, but also judged of the qualifications of the respective candidates.

"I am enclosing a copy of a bill recently introduced for the creation of a Sanitary Reserve. The enactment of this legislation will go far toward bringing about even closer cooperation between Federal and local health agencies than now exists, although I am of the opinion that this cooperative effort was never, in the history of the country, on a more satisfactory basis than at the present time."

JOINT RESOLUTION TO ESTABLISH A RESERVE OF THE PUBLIC HEALTH SERVICE

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, that for the purpose of securing a reserve for duty in the Public Health Service in time of national emergency there shall be organized, under the direction of the Secretary of the Treasury, under such rules and regulations as the President shall prescribe, a reserve of the Public Health Service. The President alone shall be authorized to appoint and commission as officers in the said reserve such citizens as, upon examination prescribed by the President, shall be found physically, mentally, and morally qualified to hold such commissions, and said commissions shall be in force for a period of five years, unless sooner terminated in the discretion of the President, but commission in said reserve shall not exempt the holder from military or naval service. Said officers shall consist of sanitarians, senior assistant sanitarians, and assistant sanitarians, and when ordered to active duty in the service of the United States shall receive the rank, pay, allowances, and leaves of absence of surgeons, passed assistant surgeons, and assistant surgeons, respectively.

SEC. 2. That for the purpose of carrying out the provisions of this act the sum of $300,000 be appropriated out of any money in the United States Treasury not otherwise appropriated.

Passed the Senate June 18, 1917.
Attest: JAMES M. BAKER, Secretary.

* * * *

THE REHABILITATION OF WOUNDED CANADIAN SOLDIERS*

Work of the Military Hospitals Commission of Canada in Restoring Functions of Injured Soldiers

[Continued from September issue.]

ORTHOPEDIC WORK

The Military Hospitals Commission decided to center its orthopedic work at one or possibly later on two or three centers. For the present the only orthopedic hospital is that at North Toronto, where a newly constructed Salvation Army training school was taken over, remodeled and considerably added to. It was decided to concentrate the work with this class of patients because of the desirability of having them treated by the very best of orthopedic specialists, such as are not to be found in every small town. Furthermore, a great deal of expensive equipment is required, and it was deemed unwise to have too great duplication of this.

In connection with the purely medical work of the orthopedic home, functional training is carried on by psychological and physiological specialists of the University of Toronto, in Hart House, a special building set aside for that purpose. Apparatus accomplishing the same end by the same scientific methods as the Amar apparatus of France has been devised by the directors of this work, and wonderful results have been achieved. Some effort has been made to have the Canadian Government adopt the Amar apparatus, but as the same work was already being done, there was no necessity. The use of the Amar apparatus begins as soon as the patient comes out from the anesthetic, whereas in Canada it is many months before the reeducation experts ever see the patient, and naturally this circumstance alters the needs to a very great extent.

The work of reeducation, as carried on by these University of Toronto men, began as purely research work in the psychological laboratory, where such marvelously successful results were achieved that the commission decided to back up the workers in enlarging their field until all Canadian soldiers in need of the treatment could receive its benefits. Efforts are being made now to assemble at Hart House every person in Canada known to have the

*This article has been prepared under the auspices of the Military Hospitals Commission of Canada in response to a request from THE MODERN HOSPITAL.

scientific knowledge necessary to carry on this work, and it may be mentioned that the number is not large.

In a brief contribution to the *University Monthly* Dr. E. A. Bott describes the ideals of his work while it was still in the laboratory stage. Appended is his article. It may be added that the commission is sending Dr. Bott to Europe to study conditions there.

REEDUCATIONAL WORK FOR SOLDIERS*

BY EDWARD A. BOTT, Department of Psychology, University of Toronto.

During the past session a special phase of voluntary war work has been undertaken by members of the University staff in the faculty of arts. The term "reeducational," in this connection, is distinct from "vocational" in that the standpoint of the former is therapeutical rather than industrial. It is an attempt, through the use of prior to final discharge, to restore as nearly as possible to special methods applied in the period of convalescence normal certain types of physical and mental disability. The treatment referred to is also distinct from, and supplementary to, the regular medical attendance furnished at convalescent hospitals and homes, and has been undertaken through the cooperation of Dr. Goldwin Howland and other medical practitioners now in charge of returned soldiers. Suitable cases for reeducational treatment are at present referred to the University from clinic, in local military hospitals, where they regularly receive massages, and in addition the majority of such cases are attending one or more vocational classes.

The principle underlying reeducational work is to put within a patient's reach the proper apparatus, assistance, and encouragement for practicing such physical movements, or mental processes as may have been interfered with or have entirely disappeared through injury or shock. Individual attention is the keynote throughout, each case being a study in itself. In commencing treatment a detailed survey of the patient's present capacity of actual performance is first undertaken, to ascertain what functions are intact in whole or in part, that may serve as a foundation in working back to normal. An individual instructor then gives his attention exclusively to a given case, and apparatus appropriate to the condition is devised and constructed. There are several advantages of this arrangement as supplementary to the electrical and manual massage regularly given at military hospitals. Mechanical appliances need not be expensive to be effective, but they contribute toward restoration of movement and control by eliciting through a precise task that most essential factor, the patient's own concentrated effort. The coordination of a partially paralyzed arm, for instance, improves more rapidly by driving a nail, catching a ball, whittling a stick, or threading a needle, than simply by having the lame joints flexed. Each man practices daily a variety of exercises suitable to his condition, and once a week is tested upon a number of typical performances. The careful measurement and recording of accomplishment, the interest aroused through individual sympathetic assistance, the sight of others' success, and the ambition to outgrow his own special apparatus, have served to increase the rate of progress of most cases, and to arouse others from a pardonable state of depression which had previously prohibited improvement.

For example, a difficult case of hysterical paralysis of both legs, in a well-knit young man of 22, was recommended in January, 1917. There was a history of burial under sand-bags in April, 1916, without visible injury. A suspected local injury in the spine was not substantiated, and in addition to electrical treatment, hypnotism had been used in England without permanent improvement. On coming to the university he could walk with great difficulty with the use of a cane, hitching the legs forward by movements of the body. He could not step over an inch stick, or raise either foot from the ground. He could not displace a football that was one inch from his toe, or put out either limb to save himself from falling. Any pro-

Courtesy of the Johns Hopkins Nurses' Alumnae Magazine.

St. John Ambulance Brigade Hospital, Etaples, France, which normally accommodates 540 beds. Referred to in Mr. Butler's article, "The Rockefeller Institute War Demonstration Hospital," August issue, page 79.

*Reprinted from The University of Toronto Monthly, April, 1917.

longed attempt to step forward would presently precipitate a most violent shaking of the limb. He thought he had ceased to improve, and was deeply depressed. After attending for two weeks his point of view changed—he resolved he could improve. Within three months he has regained sufficient control to discard his cane, to walk about fairly easily, to mark time, to step over hurdles four inches high, and to kick a tethered football across the room at a target a yard above the floor. His spirits have vastly improved, and the prognosis is for full recovery.

The treatment of distinctively psychological symptoms is more difficult than most cases of paralysis, but is meeting with success, although improvement is usually less rapid. The cases of this sort include loss of speech, temporary partial blindness, disturbances of memory and association, and very frequently in "shock" cases an inability to concentrate upon the simplest tasks, this being marked by a high susceptibility to fatigue, and to brief periods of "confusion." It is found that discouragement and depression often have deepened into obsession regarding the impossibility of improvement, owing to supposed conditions or causes that have no basis in fact. The principles described above, namely, active employment and measurement of such processes as are found intact, are also used in these cases, the first requisite being to cultivate a favorable attitude in the patient.

The work was originally begun last fall, in a more or less experimental way, at the College Street Military Hospital. Two men were treated there daily in the open wards, and made sufficient progress to warrant the continuance of the work upon a larger scale. The accommodation, however, in all military hospitals being already overtaxed, space was offered by Prof. W. G. Smith in a lecture room of the psychological laboratory in the main building. With the approval of Dr. Howland and other doctors in charge, a class was formed to treat men at the university daily, except Saturday, from 4 to 5 p. m. During the Michaelmas term three men who were able to walk from the College Street Hospital attended. At the opening of the new year it was decided to increase the number of selected patients to six, and it has since grown to nine. Additional members of the staff to the number of ten gave freely of their time to instruct men at special hours, and a daily service by private motors was arranged for soldiers unable to walk. The apparatus has now overflowed the original room into three others.

Sixteen cases have been handled in all. Of these, one who learned first to creep and then to walk since August, 1916, is now practically normal at the time of discharge. Unfortunately, three have been discharged from the service while convalescing satisfactorily, and have had to discontinue treatment in order to look for such work as they were able to do. Two patients have been absent some time through recent accidents, and one from sickness. In two further cases, apparatus has been supplied to men at the hospital, in order to enable them to treat themselves. It is, in fact, a chief object of reeducational treatment to encourage and instruct the men to treat themselves. One case only has been discontinued for lack of progress.

In an account of what the university reeducational work is doing there should be a place for acknowledgment of help from certain persons whose interest has made it possible. The incentive to commence such treatment in Toronto as war work is due to the suggestion, encouragement, and personal instruction of Dr. Shepherd Ivory Franz, psychologist at the Government Hospital, Washington, D. C., whose pioneer work in the reeducation of demented paralytics is attracting wide attention in the medical profession. It is desired, further, to thank Professor Mavor for his assistance in commencing a fund for this work. Mr. Currelly and Mr. Graham Campbell have facilitated the building of appliances in their university workshops, and thereby contributed materially to making the work a success. Mr. Campbell has also raised sufficient funds for the present term, the generosity of numerous subscribers having made it possible to purchase or construct the necessary equipment. Acknowledgment, too, is made of the cooperation of those citizens of Toronto who, through all weathers, have maintained a regular motor service between the hospitals and the university, also of the unsparing energy of Mr. H. K. Gordon, who, in acting as secretary, has coordinated and intensified different aspects of the work.

[To be continued.]

NOTES ON BRITISH MILITARY MEDICAL ARRANGEMENTS

Work in the Restoration and Reeducation of Disabled Soldiers—Treatment of Cases of Heart Disease

[By a Retired Army Surgeon.]

MILITARY ORTHOPEDIC HOSPITALS

On account of the magnitude of the present war and its long continuance, also from the serious nature of so many of the cases of wounded, the number of men disabled, either permanently or for a considerable period, has already far exceeded any previous experiences in this country. A large proportion of these men come under the head of orthopedic cases; that is, injuries to bones, joints, ligaments, and nerves, which are capable of treatment, and for which treatment may be applied that will enable the sufferer to earn a living to a greater or less extent. This treatment should be applied as early as possible, and great efforts have been made throughout the country to bring this about.

The chief hospital in England for such cases is that at Rochampton, where (as far back as March, 1916) 1,628 amputation cases had been admitted, and 932 discharged with properly fitted limbs; there was also a waiting list of 2,027, and about 300 fresh cases were being notified each month. Lieut.-Colonel Robert Jones, lecturer on Orthopedic Surgery in the University of Liverpool, was appointed inspector of military orthopedics; he exercises a general supervision over the treatment of such cases in military hospitals throughout the kingdom. One of the first of such hospitals to be established was that at Hammersmith (in the west of London), in the buildings of the infirmary and workhouse. The number accommodated was 800, and in addition to the ordinary surgical treatment, departments for massage and mechanotherapeutics, electrical treatment, radiant heat and various forms of baths were provided; also a gymnasium. There are also large workshops on the premises, where all kinds of special apparatus and appliances can be produced. The staff, besides four surgeons, includes physicians in charge of massage, electrical and balneological departments, an x-ray operator, a gymnasium instructor, and four resident medical officers.

The Pavilion Military Hospital at Brighton, formerly used for the treatment of sick and wounded Canadian soldiers, is now allotted to the English wounded, and in two divisions, comprising 610 beds, are accommodated patients who have lost one or more limbs, and who are suffering from chronic conditions (for instance, necrosis, with discharging sinuses), which render their sojourn in an ordinary hospital impracticable. These chronic cases do extremely well in the invigorating air of Brighton, and, when sufficiently advanced towards recovery, they are transferred to Queen Mary's Auxiliary Hospital, at Rochampton, to have the necessary artificial limb or surgical appliance provided. During their stay in hospital the men are taught various trades and handicrafts.

Her Majesty the Queen presented to this hospital an establishment, fully equipped and in working order, known as Queen Mary's Workshop, where various trades and useful occupations are taught to the limbless soldiers. There are four departments: (1) in the motor department the men are taught the driving, mechanism, repair, and general management of motor vehicles; with such knowledge in his possession a man, though partially crippled, may be able to earn quite good wages, either as repairer or as chauffeur; (2) in the electrical department they are taught the construction and working of electrical ma-

chines and apparatus, electric lighting appliances, electric bells, telephones, etc.; (3) in the carpentry and woodwork shops they learn the essentials of these handicrafts; and (4) in the educational classes, bookkeeping, shorthand, typewriting, etc., are taught. It is stated that men who have gone through one or another of these training courses have always succeeded in obtaining employment without difficulty.

At Tipperary is a large depot for the treatment of men of Irish regiments, who have returned home from war service, and who in a great number of cases need treatment for the effects of wounds. Massage, passive movements, various forms of electrical treatment (galvanic, faradic, ionization, etc.), Swedish exercises for special groups of muscles, and various kinds of baths are among the remedial measures employed. The men are also taught various handicrafts. Down to last August about 10 percent of the cases admitted had been returned to their regiments fit for general duty, about 20 percent fit for garrison duty at home (many of whom subsequently became fit for service abroad), about 12 percent were invalided out of the service, and about 50 percent of the admissions were still under treatment.

An interesting experiment was carried out at the Heritage Craft Schools at Chailey, in Sussex, where for many years crippled children have been educated and taught various handicrafts. Wounded soldiers similarly crippled were admitted to this institution, and to each of them was allotted one of the crippled children as an attendant, or "orderly," from whom the elder sufferer might learn how to adapt himself to the restrictions of his maimed, but not helpless, condition. It was found that the men soon became interested in the occupations of the place, the chief industry practiced being woodcraft, with some farming and gardening.

The care and training of disabled soldiers and sailors after discharge from the service has been carefully considered by the local committee established in Birmingham to deal with this question. A register of all such cases has been compiled and is being maintained. A continuance of hospital, or at any rate, institutional treatment, is in many cases necessary for prolonged periods. For the city of Birmingham (which, with a population of 868,000, is the largest city in England, after the metropolis) the General Hospital, the Queen's Hospital, and the Royal Orthopedic, the Eye, Ear and Throat, the Skin, the Lock, and the Dental Hospitals, have been brought into a combined scheme for such a continuance of treatment of the disabled as may be necessary. For amputation cases requiring further treatment, the First Southern General Hospital and the Dudley Road Military Hospital are available. For cases of blindness the St. Dunstan's Hospital, in the Regent's Park, London, is at present relied on; it remains to be seen if its accommodation will be sufficient.

In regard to the important general question of the provision of accommodation and treatment for men permanently incapacitated, the idea at first entertained by the Central Pensions Committee, that the existing civil hospitals throughout the country should be asked to take in such cases, according to their available number of beds, has, we understand, been abandoned. It would obviously be impracticable on any extensive scale, for the civil hospital provision that exists has been gradually built up to supply the needs of the civil community, and in most cases is not more than sufficient for this purpose; any permanent accommodation for those incapacitated by war must be in addition, and should be provided and maintained on a different basis.

MANAGEMENT OF CASES OF HEART AFFECTION

A piece of valuable research has been carried out at the Hampstead Military Hospital on heart affections in soldiers, with especial reference to the condition known as "irritable heart," frequently also called "soldier's heart," from its common occurrence in the young adult called upon to perform a considerable amount of strenuous bodily work, such as marching with a full kit and arms. It is similar to the affection called, in the official Nomenclature of Disease, "disordered action of heart;" this organ may be irregular in its rate, or in its rhythm, or in both rate and rhythm. The observations apply to 251 cases. Of this nummer 113 were discharged from the army as unfit for service, within a few weeks of their admission to the special hospital. These grave cases comprised 31 cases of mitral stenosis, 7 cases of mitral stenosis combined with aortic disease, 22 cases of aortic disease alone, and 53 cases of disease of the myocardium, either with or without enlargement, and either with or without mitral incompetence. The physical signs to which little value is attached by the Hampstead observers are: (1) extrasystolic or respiratory irregularity; (2) accelerated action; (3) diffusion of impulse; (4) jerky impulse; (5) short, soft systolic apex murmur; (6) systolic murmurs in the aortic or pulmonic region. In this first sifting of the cases, from 35 to 40 percent are discharged as unfit for service. In the second sifting, which applies to 60 to 65 percent of the original admissions, the patients are mostly those with "irritable heart," but some 10 percent are eventually returned as "organic" cases, leaving 55 percent as patients who have *symptoms*, but in whom no trustworthy *sign* of organic heart mischief can be detected, either at the first examination or subsequently. These are the cases on which difference of opinion as to fitness is likely to arise, and a series of test exercises was devised (mostly familiar to the men and the drill instructors, as routine physical drill), supplemented by route marches with light and with full kit. After much work on pulse rate, blood pressure, and respiratory ratio, with instrumental records, and stethoscopic examination, the authors came to the conclusion that a man's *observed* capacity to accomplish work of a given order is the only reliable test for such capacity, and that, after the first sifting, which eliminates manifest organic heart disease, exercises alone serve the purpose of determining fitness for duty. The physical sign to which most value is attached is the rate at which the pulse falls after it has been accelerated by a brief exercise; if a man walk smartly down a flight of twenty steps, along a short corridor, and up the same flight of steps, and the pulse does not return to its original level within two minutes, he will rarely reach a high-grade exercise, but quick recovery of pulse rate is no criterion of ultimate fitness. Men who improve with the exercises and can do route marching are passed, either (a) to duty, or (b) to light duty, and likely to be fit for service overseas in three months. Those who do not come up to these standards, and whose progress is slow, are passed either (c) for light duty, and not likely to be fit for overseas within three months, or requiring special medical treatment; or (d) for service at home. The respective percentages among 138 cases of "irritable heart" in these categories were: 18, 23, 6, and 17 percent; the "permanently unfit" were 36 percent. In 19 percent of the cases of "irritable heart" there was a history of rheumatism or chorea. The chief conclusion arrived at in this important research is that in classifying patients into permanently unfit, and those fit for duty in the four categories just mentioned, "a system of graduated exercises is the only reliable means at our disposal, when patients with

clear signs of serious heart affections have been eliminated, and such a system is also of distinct therapeutic value." The importance of the matter from a hospital administration standpoint is obvious; especially where demand for accommodation is considerable, continuous, and sometimes urgent. It is stated that the average sojourn of "irritable heart" cases in hospital had been three and a half months; under this method of sorting out at Hempstead the average stay has been two months only.

[To be continued.]

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Chicago to Have Reconstruction Hospital

Plans are under way for the building in Chicago of a great "reconstruction hospital," with at least 3,000 beds and with vocational schools in connection. One of these plans contemplates the state's taking over, either by purchase or condemnation, the old Cub baseball park and the erection of a hospital 600 feet long by 125 feet wide and eight stories high, to hold 3,000 wounded. This would be turned over to the War Department, and at the close of the war would be turned back to the University of Illinois as a teaching hospital in connection with the state medical school.

Another alternative would make use of existing facilities. Trustees of Wesley Hospital and Charles Deering have agreed to turn over to the War Department the entire block between Twenty-fourth and Twenty-fifth streets, bounded by State and Dearborn streets, the present hospital to be enlarged to cover the entire block. Also overtures have been made to the trustees of Northwestern University to obtain possession of the full block on Dearborn street, directly west from the present hospital, for the building of a great vocational training school.

Dr. P. H. Magnuson recently left for Montreal, Toronto, Quebec, and Winnipeg, where he will make a close study of the "reconstruction hospitals" maintained in those cities by the British government. It is planned to follow those hospitals and vocational schools, which have been highly successful, as closely as possible.

Upon his return in two weeks Dr. Magnuson will make a detailed report, which will be submitted to the State Council for Defense for consideration. The latter body plans to cooperate directly with the War Department in the matter. Major E. G. Brackett, M. R. C., who has charge of the government hospital plans, is expected in Chicago in a short time to look over the two suggested sites.

Preliminary to the work on the hospital, it is planned that a questionnaire be sent to all employers in the state, asking what forms of employment they can give to men who have sustained various injuries in battle. From this it can be determined what lines of employment should be specialized upon, and this also would afford a means of employment for the vocational school graduates.

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Work of the Ohio Council of National Defense

A new special committee of the Ohio Council of National Defense, devoted to health, hospitals, and nursing, has been appointed by Governor Cox. In brief, the functions of this committee are the following: to work out for the Ohio council a state program on health, hospitals, and nursing; to bring existing health agencies in closer relation to the Ohio council and to the state departments; to make plans for the safeguarding of the health of the civilian population with particular reference to the health of workers employed in the manufacture of war materials; to gather information for the council relative to hospital facilities for the care of returned injured and convalescent soldiers; and to recommend plans to increase the number of graduate and pupil nurses both for public health and hospital service.

The membership of the committee is as follows: chairman, Dr. R. H. Bishop, Jr., health commissioner of the City of Cleveland; secretary, Mr. Howell Wright, Anisfield Building, Cleveland, executive secretary of Cleveland Hospital Council; Mr. Fred S. Bunn, superintendent of Youngstown City Hospital, president of the Ohio Hospital Association; Miss Mary M. Roberts, superintendent of Holmes Private Hospital, Cincinnati, member of nurses' examining committee, State Medical Board; Mr. Robert G. Paterson, 141 E. State Street, Columbus, executive secretary of the Ohio Society for the Prevention of Tuberculosis; Dr. C. D. Selby, Spitzer Building, Toledo, member of the medical section, State Committee of National Defense, and secretary of the Ohio State Medical Association; Dr. George D. Lummis, chairman of the Public Health Council, State Department of Health; Rev. Bernard P. O'Reilly, St. Mary's College, Dayton, O.

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The Cantonment Hospitals

At each of the cantonments for the new national army hospital provision will be made for 3 percent of the troops. At each cantonment a complete hospital containing at least 1,000 beds will be constructed, with a space reserved for extensions. Sixty acres have been allotted to each hospital and its auxiliary buildings. The hospitals will cost approximately $500,000 each.

One type is being used in all the hospital construction work done by the army. All the buildings are 24 feet wide, the length varying to meet the needs. The wards are usually 157 feet long, which is the size needed for 32 beds. There will be a diet kitchen for each ward, and a corridor connecting with the buildings on either side, which will be covered.

About 70 buildings will be comprised in each cantonment hospital on the 1,000-bed basis. In some cases two wards are joined, thus reducing the actual number of separate buildings, but the number of buildings will reach about 70, counting each ward as a building.

Each hospital will have a well-equipped laboratory, where bacteriological and pathological work can be done which any well-equipped hospital could handle. Some special tests will be made at the department hospitals, which will take care of any work that the divisional hospitals at the camps cannot attend to.

* * * *

Camps to Be Made Hospitals

The hospital train built at Pullman last summer for service on the border has been brought to the Pullman shops, where extensive alterations and repairs are to be made. Major W. L. Hart is now in Chicago directing the planning of a new hospital train of 280 beds, which is to be built and prepared for service at once. Madison Barracks, N. Y., has been designated as a hospital camp to accommodate about 2,000 patients, and it is expected that Fort Sheridan, Ill., Fort Riley, Kan., Leavenworth, Kan., and McPherson, Ga., will also be designated as hospital camps, with capacities varying from 2,000 to 5,000 men.

It is proposed to build a sufficient number of hospital trains to carry the wounded from the coast to these designated hospitals and take them back again to the coast when they are ready for the front.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH,
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

Public Health Nursing and the Public

BY ELIZABETH McCRACKEN, Washington, D. C., Editor of Home Progress Magazine, Author of The Women of America and The American Child.

We are accustomed to the thought that one of the most important elements in public health work is instruction; the visiting nurses not only nurse the sick persons whom they visit, but also teach the well members of the families and occasionally the sick members themselves the ways and means of keeping well and also just what good nursing is and how to do at least a portion of it. Certainly this is important. And it is very well done.

That is to say, it is well done among the poor—in the tenement districts. In such localities, among such people, one will often find a very intelligent and even fairly complete idea as to what public health is and what relation to it the visiting nurses have. Whenever this fortunate relationship exists in that particular public, it would almost seem as though there were little more needed in this direction.

But there is another, and that a very large, part of the community which lacks such instruction. This is the public living comfortably in suburbs and small cities, and in the more moderately priced houses and apartments of the large cities—people who, when they are very ill, can afford to have the entire time of a nurse. That is to say, they can afford this for a limited time. At the end of that time one comes upon their great need of knowledge of just what a visiting nurse is! They actually, in many cases, do not know. And their ignorance is dangerous, not only to themselves, but to others.

For instance, in the matter of caring for a young baby: the poor can usually have the services of a visiting or infant welfare nurse at least as long as she is urgently needed—sometimes they have her watchful care until the baby is one or two years old; the very rich have such care given by a nurse; but those mothers whose incomes are moderate do it themselves, after they return from the hospital, or from the moment they are able to be out of bed at home. In the case of a delicate baby, surely this is somewhat hazardous. And why do not babies of moderate means have a trained nurse for this period? The reason is that their mothers do not know, and, worse still, very often the friends of their mothers do not know, anything about visiting nurses, except that they wear a certain kind of dress and visit the sick poor. Only the other day a neighbor of mine was saying to me with real concern that she awaited with much apprehension the return home from the hospital of her sister, whose first child was about two weeks old. "The baby is so very frail, and my sister knows nothing about children; I am so afraid that she will not bathe the child properly, or in some other way do something not just right."

I at once suggested that she speak to her sister about the district nursing association in the place and arrange to have a nurse come every day and care for the child. She looked at once surprised and displeased. "A visiting nurse?" she exclaimed. "We are not yet in a class that has to have that sort of thing."

This is only too true. That is the pity of it. Unless that baby's aunt and that baby's mother, and very likely other members of the baby's family can be instructed in this matter of district nursing, and that convincingly, and moreover within a short time, the delicate little baby will be out of the class (made up of the very rich and the very poor) that does have skilled nursing, and in the class that is cared for by young, often nervous, usually frightened, and always untaught mothers.

One always thinks first of the relation to babies and young children of any educational or other activity which one would like to see extended. And it is, indeed, the case that the babies of those persons who do not understand what public health nursing is are the sufferers from this ignorance in whom one is most interested. But there are others. One important group consists of convalescents from serious illnesses. After an operation, for instance, or some such illness as pneumonia, the convalescent patient needs skilled nursing, a certain amount of it, for a considerable time after the regular nurses have left the case. Here, again, the very rich and the very poor usually have it; persons of moderate incomes often do not.

I know from my own experience that it is difficult to have, even though one may be so fortunate as to know something about district nursing. I happened, a few years ago, to have pneumonia. When convalescence began my physician said that I no longer needed nursing for more than one hour a day, and suggested having a visiting nurse. I followed this advice, but not without some difficulties. Not only several of my friends, but one or two neighbors protested to my family, saying that I ought not thus to hazard my recovery. One zealous acquaintance stopped my physician on the street to give him her views on the subject. "Pneumonia is such a serious thing," she informed him gravely, as he told me, "surely so long as any nurse at all is needed, she ought to be a trained nurse, of the regulation kind." My physician, who is a great supporter of visiting nursing, took time to explain to her that the nurses of that particular visiting nurse association had had not only the "regulation" training, but also additional courses in public health nursing, to fit them for their work. It happened, fortunately, that the nurse who chanced to come to me had graduated from the same hospital as the regular nurse I had been having, and had taken care of more pneumonia patients than she!

It is agreed among doctors, nurses, and other thoughtful members of the community that the "neglected age" is the reason for much ill health in mature life. It is during this age that children have many of the "children's diseases" and that adenoid growths occur. The only person who supervises their health during this period is, too often, the inexperienced mother. Of course, when a child becomes really ill, a physician is called in; but the nursing of that sick child, except in a few cases, is left to the mother, the illness not being serious enough to warrant a regular nurse. Can there be any doubt that many of the illnesses following measles, grip, and even bad colds, are due to the fact that the child had no professional nurse? This is a field for the public health nurse—a field almost entirely

uncultivated. When a child falls ill, it is a little too late to begin instructing the mother as to what the public health nurse might do for her. By the time she is fully convinced the child's illness is over.

Surgical dressing of minor injuries constitutes another important part of nursing which, in the homes of persons of moderate incomes, is usually done by a member of the family, and often not done well. Burns, for instance: how often they are badly treated! The result is, as in other amateurishly done surgical dressings, surface infection and danger of more serious poisoning. These patients do not have the advantage of the visiting nurses for such services, simply because they and their families have had no instruction as to what these nurses are and what they are for.

How does it happen that this important matter of instructing the public as to what instructive visiting nursing it, should be so neglected? Miss Gardner, in her book, "Public Health Nursing," says that nurses are seldom in the way of gaining practice in literary work, and that, even were they more often writers, they are too busy doing their work to write about it. It is true that amazingly few nurses are authors. But what occurs in regard to the placing of their articles when they are, seems to me almost as great a reason why what they have to say in nursing in general, and visiting nursing in particular, does not enlighten the particular public under discussion. Almost invariably they publish in professional magazines; hence their articles concerning their profession are read by the members of their profession and not by the general public.

Then, if I may be allowed to say so, it seems to my lay mind that nurses mingle too little, in their free hours, with a number of kinds of persons. One can readily understand that, since the nature of their work is such that they must do this very thing during their working hours, perhaps they especially feel the desire for their own professional group when off duty. But it certainly curtails their opportunities for making that for which they stand clear to the community. It is as though a clergyman should see only his own parishioners, and other clergymen, should never seek the rest of the world or encourage it to seek him, and should have no purely social, friendly intercourse outside his profession. It is quite certain that such a clergyman, whatever other power he might wield, would never be able to effect a full sense on the part of the public of what a minister is and what he is for!

What shall we do about it—this important matter of making known to that portion of the public which needs the ministrations of public health nurses and is not getting them, what a great force for the well-being of their families is at hand? Not only should nurses write more for publication, I think, but they should place their articles not merely in their own journals, but also in the general magazines. This will interpret them to many thousands of persons. Then, if it be at all possible, they should advance this instruction of the people by a more general social life. For, after all, one learns best about any profession from a friend who is a member of that profession. If among every nurse's friends there should henceforth be a few more who are not nurses, there would be considerable increase in the bulk of knowledge of what public health nursing is—and, more important still, exactly what kind of person, professionally, the public health nurse is.

However, we must not either ask or expect that the nurse will do everything in this matter. There is a great deal more that doctors may do than they are now doing in this field of instruction. In the first place, they, really better than anyone else, can gain the confidence of their own patients for the district nurse. There is, perhaps, no person whose opinion is so highly regarded by the public under discussion as that of the family physician. One must not, of course, forget that he has scant leisure for educational work among his patients, other than applies to the instructions he leaves with his prescriptions! But in the interest of those very instructions, he can do nothing better than take sufficient time to point the way to the best aid possible in having those instructions rightly carried out. It will take him less time than it will anyone else to make the person in charge in the family understand that neither he nor the apothecary can succeed without the nurse—and her work. Yes, doctors might do a very great deal more than they are now doing.

Also, there is a very great deal that any and every lay person who has some knowledge of public health work can do. For instance, members of clubs can use their influence to have lectures on the subject given before their organizations. Also, they can do their bit toward helping the local visiting nurse association with contributions, not only of money, but of what may be called local publicity.

There is not only the reason already suggested why the public of moderate incomes should be instructed as to public health nursing; there is still another reason. This is the matter of support. Public health is still very largely supported by private contributions. While many of these come from persons of large means, some of them come from those whose incomes are smaller—from that very group in which there are so many who do not understand the significance of the work, nor its elements. Did more of them know, more of them would help; when they do know, they will help. The greater the financial support, the greater the extent of public health work. And this support depends upon instruction.

We cannot afford not to give this teaching—in any way, in every way in which it can be given. That great part of the public of moderate means not now having the services of district nurses needs those services; these people need public health work. And the public health work needs them; their contributions are needed, and their cooperative sympathy is even more wanted. In the tenements, the district nurse instructs while she visits. In the suburbs and small cities and the comfortable, but inexpensive quarters of the large cities, she must instruct before she visits, or someone else must do it for her. Let her do it, or see that it is done, in order that public health nursing, not to say public health, may become more prevalent, to the greater well-being of us all.

The Movement to Increase the Number of Trained Nurses

The complete report will not be available for some time of the result of the wide appeal that is being made by the Committee on Nursing of the General Medical Board of the Council of National Defense, to young women to meet the need of the country for nurses, and the appeal to hospitals to provide for admission of a largely increased number of students. There are evidences, however, of a prompt response to both these appeals that are too interesting and too illuminating to be withheld until the final report is ready.

Miss Riddle has already given an interesting account of the Newton Hospital's efforts to meet the need, and to this we can now add a report of the course recently established by the Presbyterian School of Nursing, New York City, presented by Miss Alice F. Bell, a member of the faculty:

"The fourteenth of June, a circular was issued by the School of Nursing of the Presbyterian Hospital, stating

that plans were under consideration to provide through an increase in the numerical strength of the school, to meet in part the anticipated shortage of nurses attendant upon the unusual demands of the war. Through the generosity of interested friends, additional quarters were secured for the accommodation of an extra group of students to be admitted early in July. The housing problem, which at once confronts any school of nursing considering enlarging its staff, was thus temporarily solved.

"New conditions of entrance for students were also established, in that candidates with higher educational preparation, namely, graduates of approved colleges for women, having completed satisfactory work in science, were to be admitted on an advanced basis, which would permit them to complete their training in two years and three months instead of the customary three years. An arrangement was also made between the Department of Nursing and Health, Teachers College, Columbia University, and the School of Nursing in the Presbyterian Hospital, for a combination of courses in nursing leading to the Bachelor of Science degree, and the diploma of the School of Nursing.

"Candidates for admission to this course should have completed four years of high school and two years' work of collegiate grade in an approved college, normal or technical school. The professional course of three years is to include the regular theoretical and practical work prescribed by the Presbyterian Hospital School of Nursing, and, in addition, certain selected courses amounting to one year of work, or 32 points of credit in the School of Practical Arts, Teachers College. This work in Teachers College will be taken mainly in the first and last years of the professional course, and will be carried on concurrently with the work of the training school, the student being in residence in the hospital during the whole or main part of this period. The general plan of work in the School of Nursing includes instruction and training in medical, surgical, and obstetrical nursing, in the care of children, and in the diet school, dispensaries, and social service department of the hospital. In the third year arrangements have been made for training in visiting nursing in the Henry Street Nurses' Settlement.

"This endeavor to open up more freely to college women this field of public service has met with gratifying response. Several leading colleges, through their official publications, have brought the problem to the attention of the alumnæ, and urged the adoption of this opportunity for real service in the present national crisis and preparation for practically unlimited usefulness in the work of reconstruction inevitably following the war. Inquiries have also been received from members of college faculties as to the possibility of incorporating in the curriculum courses of study definitely related to the nursing field.

"In some 750 applications for admission to the School of Nursing received since the middle of June, inquiries have been received from nearly 200 college women, including some 70 with partial college training. All parts of the country and over 40 colleges have been represented. As to the personnel of the 22 students admitted in July, 50 percent were college women, representing seven different institutions, the remainder of the group having academic preparation equivalent to high school. The candidates listed for the October class show about the same proportion. In a group of 35 students are found 12 college graduates, 9 with two or more years, and 7 with one year of college work. This may serve as encouragement for advancement of admission standards in a state requiring only one year of high school as preliminary education for admission in Schools of Nursing."

Perhaps the most marked innovation and even more daring breaking down of tradition than the giving of credit in terms of period of service for college work has been made by the Bellevue Hospital Training School in its arrangement for an extern service or non-resident course. This course must of necessity be arranged on the basis of a forty-eight-hour week schedule. The pupils will receive no allowance and will meet their own maintenance expenses. In order that they may not lose the valuable experience offered by night service, some arrangement will be made whereby they can come into residence for a short period, possibly during the vacation months.

As the announcement of the course has only recently been issued, the first class not entering until December, it is not possible as yet to present any results, but the number of inquiries already received concerning the course leave little doubt as to its success.

The cooperation of the various schools of nursing with the visiting nurse organizations in this effort rapidly to train and mature a largely increased body of nurses, is also worthy of note. In New York City, through Miss Cadmus, superintendent of the Manhattan Maternity Hospital, several of the affiliating schools are arranging to send their pupils for a fourth or additional month of district maternity nursing under the supervision of the Henry Street Settlement nursing service. This experience will include prenatal, delivery, and postmortem nursing care. The Henry Street Settlement will meet the maintenance expense of these students, and the work will be arranged on a forty-eight-hour week schedule. These same conditions will obtain for the students from the Presbyterian School of Nursing that are to take the course of four months in public health nursing. Several other schools also have such an affiliation with Henry Street Settlement under consideration.

The Department of Nursing and Health, Teachers College, is arranging to open to undergraduate students a number of courses in public health nursing, and students who are obtaining their practical experience at the Henry Street Settlement will be given the privilege of attending two of these courses, the settlement meeting their tuition fees in addition to providing maintenance. We understand that similar opportunities are being given by the Visiting Nurse Associations of other cities.

Institutional Care of Infants

Jules M. Brady, S. B., M. D. (Arch. Pediat., 1917, XXXIV, No. 5), protests against the wholesale condemnation of infant asylums, and especially against the comparison with the boarding-out system made by Dr. Chapin. He presents an account of an experience extending over twelve years at St. Ann's Infant Asylum, St. Louis, conducted by the Sisters of Charity. Most of the infants are born in the institution, which has conducted with it a large maternity hospital. All the infants are fed artificially, but there are always present in the institution more babies than could be ideally cared for because of the desire of the sisters to extend the scope of the charity as much as possible. There are three wards for infants, each in charge of a sister trained in the care of babies. There is also a milk laboratory. The babies are cared for by a corps of nursery maids under training, who remain eight months. One ward contains from 60 to 90 babies and the other two care on an average for from 30 to 40. In 1912 Dr. Brady reported 170 babies cared for in the large ward, with a mortality of 10.5 percent. Largely through improvement in methods of artificial feeding, the mortality has been greatly diminished. He reports a mortality of 7.5 percent for infants older than 10 days admitted from September, 1914, when he became physician-in-chief at St. Ann's, to September, 1916. He mentions that St. Louis has the lowest infant mortality of any large city in the country. Ten years ago the death rate per thousand was 134.5; this year it is 182.1.

Brady concludes that the appalling mortality of infant asylums is entirely unnecessary. For successful care in an asylum, however, old-time methods of feeding infants must be discarded.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.
Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, O.

In this department will be found an announcement of the conference of dietitians to be held in Cleveland October 18-20. Not only is it to the interest of every dietitian to be present at this meeting, but it is her duty.

Frequently in the past this department has urged the dietitians to get in close touch with each other. We know very little of the work being done in hospitals other than the ones with which we are immediately associated. In an effort to learn more of the conditions in various institutions we found that in the majority of hospitals very little dietetic work is being done, though a few hospitals are laying the foundation for the building of splendid departments.

At the American Hospital Association there was some discussion of the dietary department and, incidentally, the dietitian. The general trend of opinion was toward the centralization of the commissary department, with one woman in charge of the entire work. This means a woman with executive ability as well as a knowledge of foods. If she is to work with the physician in diet for disease, she must have a scientific background as well. The dietary department is going to be put on a very much different basis and the status of the dietitian greatly improved. It behooves those of us who are now in the work to get in the front ranks.

We are anxious to have a complete mailing list of dietitians. You will be sure of being on this list if you send your name and address to the editor of this department. Should you wish a program of the meeting, please send your address at once.

* * * *

Conference of Dietitians

A conference of dietitians is to be held at the Hollenden Hotel, Cleveland, Ohio, October 18-20, and superintendents of hospitals and similar institutions are specially requested to have their dietitians attend.

That there should be an opportunity for the dietitians of the country, particularly the hospital dietitians, to come together in conference and to meet with the scientific research workers has long been felt. Now that our national crisis requires conservation on every hand, it seems highly important that the several hundred dietitians of the country who have the feeding of many thousands should come together to discuss conservation and the food problems of the day,

A very interesting and profitable program has been prepared, including sessions on foods and nutrition, diet in disease, and institution management, as well as conservation. A number of prominent speakers have been secured, including Mrs. Caroline Bartlett Crane, chairman of the Women's Committee of the Council of National Defense for Michigan; Dr. Ruth Wheeler, University of Illinois; Miss Mabel Little, Cornell University; and Dr. Harold O. Nolan, Interstate Medical Journal. The program will include a number of round-tables and discussions on important topics, and also visits to the various hospitals of Cleveland.

Altogether the meeting promises to be a most important one, not only for the dietitians, but for the hospitals and institutions with which they are affiliated.

The meetings will be held in the Hollenden Hotel. Those wishing accommodations at the Hollenden will please write Miss Lulu Graves, Lakeside Hospital, Cleveland. The rates are: single rooms, $2 and up; double rooms, $3.50 and up. Accommodations may be had at other convenient hotels, rates being as follows: Statler Hotel—single room, with shower, $1.50 and up; double room, with shower, $3 and up. Euclid Hotel—single room, $1.50 and up; double room, $2.50 and up. Olmsted Hotel—single room, $2 and up; double room, $3 and up. Colonial Hotel—single room, $1.50 to $3; double room, $2.50 to $4.50. Y. W. C. A.—rooms, 50 cents, 75 cents, $1; breakfast, a la carte, 15 cents; luncheon, a la carte, 15 cents; dinner, table d'hote, 35 cents.

Those wishing printed programs will please write Miss Graves, Lakeside Hospital, Cleveland, or Miss Lenna F. Cooper, Sanitarium, Battle Creek, Mich.

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Conservation of Food

BY DR. J. A. WESENER and GEORGE L. TELLER, of The Columbus Laboratories, Chicago.

[Continued from the September issue.]

We, therefore, hold to the view that white bread, from a purely nutritive standpoint, is far better for the consumer, both economically and nutritionally. In discussing a subject of this kind, the physical ailment, such as constipation, must be entirely discarded, as that is a factor which should be treated along medical lines and not carried in as one involving a question of feeding. The more nearly we can secure 100 percent digestibility in the use of our foods, the better shall we succeed in the economical phase. If we take a food in which the nutritive elements are capable of 100 percent digestibility, and introduce disturbing factors, such as fiber, which bring on excessive peristaltic action, a considerable portion of these nutritive elements will be discharged from the bowel, for the reason that they are not given the opportunity of lingering there long enough to be completely digested and assimilated.

We have always looked upon whole wheat and graham breads more as medicinal foods than as ordinary foods. They are always spoken of as health breads, and the great slogan has been that they contain all of the elements of the wheat berry, plus enough of the roughage to bring about good, healthy peristaltic action. And, in this connection, it must be remembered that while whole wheat and graham flour represent practically the whole wheat berry, therefore you would think it would sell for less money than the refined flour, but just the contrary is true in that a fancy price is demanded for these products. A patent flour represents about 65 percent of the whole wheat berry and naturally, therefore, should sell for more money than the whole wheat or graham flour. In the present crisis of food shortage, it should be the duty of all manufacturers of foods to strive to get 100 percent of yield. The offals, such as bran from the wheat berry, and bran material from other cereals, should not be incorporated in the finished product, even if the output and volume thereby are increased. It is far more economical and advisable to use the refined 100 percent digestible food product as food, and

then, if the medicinal factor is involved, it would be cheaper to feed such individuals on agar-agar or wood sawdust. Either one of these would give them sufficient roughage and at a minimum cost.

While we have shown very clearly that the fiber in whole wheat and graham flour is not the factor demanding the high premium on such products, there are other elements present in the whole wheat and graham flour which are very necessary from a purely nutritional standpoint, and these also have important bearings on the well-being of the individual. These we shall discuss in our next article.

[To be continued.]

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AN ELECTRICALLY HEATED FOOD TRUCK

How the Massachusetts General Hospital Solves the Problem of Hot Meals for Patients in Rooms Distant from the Kitchen

BY JOSEPH B. HOWLAND, M. D., Acting Administrator of the Massachusetts General Hospital, Boston.

The difficulties of providing in a satisfactory way hot meals to patients located some distance from the kitchen are only too well known to hospital superintendents.

The Massachusetts General Hospital made a careful study of the different methods in use in the private wards throughout the country, and in no case were we quite satisfied that the problem had been wholly solved. We therefore decided to experiment with an electrically heated truck, which, after several months' service, has proved so satisfactory that I think it may be of interest to the readers of THE MODERN HOSPITAL. The accompanying illustration shows most of the interesting points of the truck.

Electrically heated food truck in use in the Massachusetts General Hospital.

The truck is lined with galvanized iron. The exterior is of black Russia iron. All walls, top and bottom are insulated. In the floor are located three electric stoves, each of which may give either a high or a low heat.

In our private ward we have a truck for each of the eight floors, made to hold as many trays as there are bed patients' rooms on each floor. Our method of using the truck is as follows:

Before each meal the trucks, which are kept in a room for that purpose, are connected with wall plugs and are thoroughly heated. They are then wheeled to the kitchen, one at a time, where they are again connected with an electric plug to insure a continuance of the heat. Trays for each floor—after the meal is served—are then slid into grooves having spring clips, which hold the trays tightly in place. The doors are closed and the truck is then sent to the diet kitchens on the different floors. On arrival, they are again connected to the electric current. If the inside is found to be too hot, the heat may be turned down or turned off. Each tray is removed as it is required and the dishes set up again on a cold tray, which has been arranged with cloth, silver, etc. Cold dishes are sent to the diet kitchen on the top of the truck, which is provided with a rail to prevent the receptacles from slipping off.

Although our private ward is an eight-story building, meals served on the top floor are as hot and attractive when the patient receives them as though taken directly from a range close at hand.

* * * *

HEATED FOOD BOXES FOR SERVING HOT FOOD FROM A CENTRAL KITCHEN

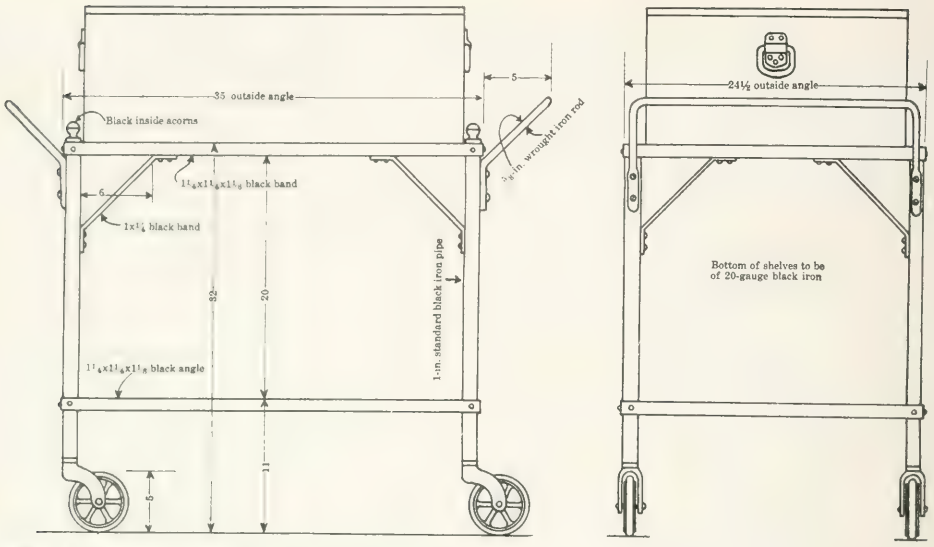
Food Served Hot at the Bedside in Wards of Philadelphia General Hospital by Utilizing the Principle of the Fireless Cooker for Food Boxes

BY HELEN L. WALLACE, Chief Resident Dietitian Philadelphia General Hospital.

Food distribution in a large institution is a problem to be worked out by all dietitians. The floor plan and centralizing of food preparation will regulate various features which are met differently according to these points.

The method which I am requested to explain is used in a municipal hospital where the average number of patients fed per meal is twenty-five hundred. The food is prepared in one general kitchen—at this point placed in food boxes especially designed for our use. These food boxes are constructed on the principle of the fireless cooker; that is, are insulated with half-inch asbestos lining, and are of sufficient size to hold five food containers of the usual steam-table equipment style, from which fifty patients may be served.

Fig. 1. Heated food box and iron truck for the distribution of hot food from a central kitchen throughout the wards in Philadelphia General Hospital.



Figs. 2, 3. Construction diagrams of Philadelphia General Hospital warm food trucks. The truck is enameled white, and has four rubber-tired swivel casters. For details of food box see Fig. 4.

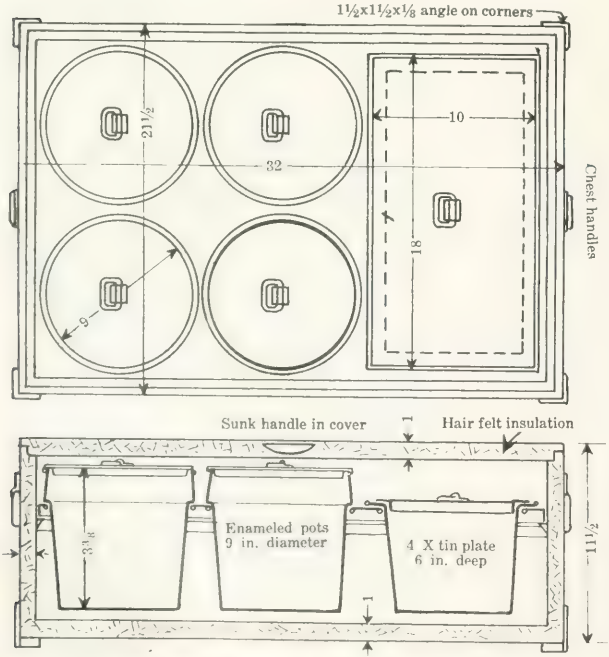


Fig. 4. Details of construction of Philadelphia General Hospital hot food boxes. All containers are to have flat tin covers with small drop handles. The outside of the box is to be of No. 20-gauge galvanized iron; the inside is to be lined with 4 X tin.

If these containers are heated when the hot food is placed in them, because of the heat-retaining properties of the interlining the food will be the proper temperature at serving time.

From actual experiments, the temperature, which had originally registered 212 F., dropped during a period of five hours to 160 F.

Eight of these boxes are placed on an electric truck and quickly taken to the central kitchen of each department.

The number of wards in the different departments varies from three to ten, but each ward has its own food box plainly marked.

For each box a light angle-iron carriage has been constructed on the idea of a tea wagon, with two shelves. Upon these shelves may be placed a pitcher of milk, bread, soft diet, desserts, etc. Each box is placed upon its carriage and wheeled directly into a ward.

About five minutes previous to the hour of serving the diets, trays are placed upon each patient's bedside table, containing the necessary cold dishes for the serving of the diet. The serving plate is kept in the department kitchen steam cabinet and placed in the lower shelf of the carriage when the food box is delivered, so insuring the warm plates. As the carriage is wheeled through the ward, hot food is served at each bedside by a nurse in charge.

All special diets are prepared in a separate diet kitchen, in which the student nurse receives her practical training in dietetic therapy. These diets are marked and sent to the kitchen of each department and served by a nurse to the ward in which the patient is.

DISPENSARY AND OUT-PATIENT WORK

Conducted by MICHAEL M. DAVIS, Jr.,
Director of the Boston Dispensary

Please address items of news and inquiries regarding Dispensary and Out-Patient Work to the editor of this department, 25 Bennett street, Boston, Mass.

The Boston Dispensary in Its One Hundred and Twentieth Year*

In September, 1796, seventy-four citizens of Boston subscribed their names to an agreement establishing the Boston Dispensary for the sick poor of their city. The institution which they then founded is thus the oldest medical organization in Massachusetts and the third oldest in the United States. The names of those who signed the parchment, which hangs today in the dispensary's office, include some of the leading men of the Commonwealth at that time, Samuel Adams among them.

At its beginning the Boston Dispensary had merely an office in a drug store, located in what is today the heart of the business section of Boston. Here medicines were dispensed on the prescription of the physician of the dispensary. He visited the patients in their homes, and during the first year Dr. John Fleet, the one doctor, treated 80 cases. Boston was then a town of 20,000 inhabitants, and this was, therefore, one patient for every 250 of the population. In 1916 the Boston Dispensary had about 40,000 men, women, and children as patients, and as approximately 32,000 of these came from within the city limits, about one in every 23 men, women, and children in Boston received care from this institution.

Fig. 1. The Boston Dispensary.

An effort to prevent that "dispensary abuse," which still tries the souls of certain practitioners and superintendents, is apparent in the early days of the Boston Dispensary. Every person who subscribed $5 or more to its funds was supplied with a card which he could give to "deserving poor" of his acquaintance, and these "worthy objects of charity" could secure the services of the physicians on presentation of these cards at the dispensary. For each $5 given by a subscriber, two patients might be "kept going" by him at one time.

But, as the City of Boston grew in size and the number of physicians and beneficiaries increased, the requirement of a personal introduction for each patient became cumbersome. Besides, the physicians, instead of merely seeing patients in their homes, began to see patients at the dispensary itself, or sometimes in their private offices. Dr. Oliver Wendell Holmes, who was a district physician of the Boston Dispensary in 1837, found the ancient system of cards from subscribers so inconvenient that he wrote a letter to the board of managers, as pungent as we should expect from the Autocrat of the Breakfast Table, and in this letter he urged that the old plan be abolished and that a clinic should be provided, "to which such patients as can safely and conveniently leave their own residences shall be expected to resort for advice."

Dr. Holmes' suggestions were shortly followed. Cards from subscribers were abandoned. Organized out-patient clinics were established. The dispensary moved in 1856 to its present site, only about half a mile from its original location. The small building which it then occupied was torn down in 1883 and replaced on the same land by a much larger structure. This in turn has been four times increased since then. The original work of the Boston Dispensary was, as we have seen, the treatment of the sick in their own homes, and this has continued until the present time. The municipality of Boston has remained one of the few in the United States which does not provide treatment for the sick poor in their homes. The early establishment of the Boston Dispensary and the service rendered by its district physicians for four generations, is doubtless the reason for this unique situation.

But the out-patient clinics caring for ambulatory cases increased by leaps and bounds, whereas the treatment of patients in their homes grew but slowly. In recent years, owing to the greater use of hospitals and other conditions, the district work has not increased at all. The main service of the dispensary is today in out-patient clinics. These are the central features, in spite of the fact that since 1912 a hospital for children with twenty-six beds has been maintained.

But with 15,000 babies and children under care annually, a small hospital ward becomes, as may be imagined, rather an adjunct of the children's service in the out-patient clinics and not the overshadowing feature of the children's work as a whole.

The accompanying table shows what the Boston Dispensary does today:

*Prepared at the request of THE MODERN HOSPITAL by Michael M. Davis, Jr., director of the Boston Dispensary.

WHAT THE BOSTON DISPENSARY DOES

MORNING CLINICS

Open daily. Small fees charged for admission, medicines, operations, etc.; remitted when necessary.

	New patients (1916)	Visits
General medical (adults)*	3,581	16,005
Children's medical*	2,772	14,162
Surgical*	2,768	11,179
Genito-urinary*	1,019	14,278
Gynecological*	980	6,796
Nose, throat, and ear*	3,328	11,549
Eye	2,405	9,085
Dental*	1,978	4,032
Dermatological	1,887	8,409
Orthopedic	743	3,146
Rectal, x-ray, neurological, children's preventive, gymnasium, massage	1,456	8,213
Total morning clinics	22,917	106,854

*Teaching clinics, Harvard or Tufts Medical School, or both.

EVENING CLINICS

On a self-supporting basis, especially for wage-earners. Fees charged which cover cost. Medical staff salaried.

	New patients (1916)	Visits
Eye	548	1,294
Genito-urinary	551	8,195
Syphilis	188	1,671
Nose, throat, and ear	91	358
Total evening clinics	1,378	11,518

A general medical evening service will be opened during 1917.

PATIENTS TREATED IN THEIR HOMES THROUGHOUT BOSTON BY OUR DISTRICT PHYSICIANS

Patients during 1916, 7,079. Visits paid by the doctors to their homes, 11,941. Nursing service provided by the Instructive District Nursing Association of Boston.

PRESCRIPTIONS

Prescriptions of medicine issued, 1916, 60,527. Eyeglasses, orthopedic plates, or surgical appliances furnished to over 3,000 patients. Prices near cost. Payment by installments arranged.

THE X-RAY DEPARTMENT

Does work for dispensary patients; also for patients of private physicians who can pay a doctor, but not the regular private fee for an x-ray. The laboratory provides full clinical service.

THE HOSPITAL FOR CHILDREN

Beds for babies and children up to 12 years, 26. Patients, 1916, 453. Hospital days, 7,483. Every child followed up for at least one year after discharge. Harvard and Tufts teaching in the wards. Three months' course in pediatrics for pupil nurses from affiliated hospitals.

SOCIAL SERVICE

Special workers assigned to the larger clinics. Social histories taken of all patients therein. Cases taken up for intensive social work, 1,915. Patients receiving minor social service, about 8,000. Students in medical social service trained.

THE STAFF

Physicians on official staff of clinics, 90. District physicians, 7. Employed staff (nurses, social workers, pharmacists, engineers, orderlies, servants, etc.), 90. Volunteer workers and social service students annually, 30 to 40.

What are the principles which have governed the organization of these out-patient clinics of the Boston Dispensary? They are:

1. *Cooperative diagnosis.*

The organization of a series of clinics in charge of specialists all in action at the same time, with the administration such that joint examinations of patients or consultations by different specialists are facilitated and the resources of x-ray, laboratory, etc., made readily available.

2. *The institution is responsible not only for diagnosis, but for treatment, and must endeavor to make it possible for the patient actually to carry out the treatment.*

This implies individual attention to the patient so as to decide at every visit whether he needs to come back again for treatment or to be sent to a hospital; and a follow-up system, which will tell us whether or not the patient does what he should and will get after him if he does not.

3. *Clinics must be adapted to the needs of those people in the community who need [illegible].*

This means morning clinics with nominal fees, remitted whenever necessary. It also means evening clinics to meet the needs of wage-earners who can come during the daytime only at a serious sacrifice of wages. Since many self-supporting wage-earners, as well as the very poor, need the services of the clinics, the evening clinics should be based on the principle of self-support, charging fees corresponding to cost, and provide a salary for their medical staff.

4. *Social problems of patients are involved with their medical problems, and both must be diagnosed and dealt with to secure the best results with either.*

Social service is important to a dispensary or hospital chiefly because of its contribution to the medical results. To be most effective the Social Service Department must be an integral part of the institution, not under merely affiliated management. The social workers must go into the clinics and have first-hand contact with patients, as well as take such cases as come to them on the suggestion of others. They must survey the social problems of patients in groups. They must cooperate with other charitable agencies, in making the resources of the medical institution useful to non-medical organizations in the community.

5. *The dispensary must be a center whence new knowledge is disseminated.*

The dispensary must be a teaching institution. Its medical and lay workers must teach themselves to do their jobs better. They must teach medical students, nurses, and social workers, and also do their best to teach the community more about the curing and preventing of disease. They must seek new knowledge from the rich material which is at hand. Each of the thousands of dispensary cases presents its problem of illness; each its human and economic problems as well. From some cases medical science can learn; from others, light can be shed on broad questions of public health and on community needs. These educational possibilities must be made real, and the results of the medical and social studies must be interpreted to the community through publications.

6. *The government of the institution must be made cooperative to make it most efficient.*

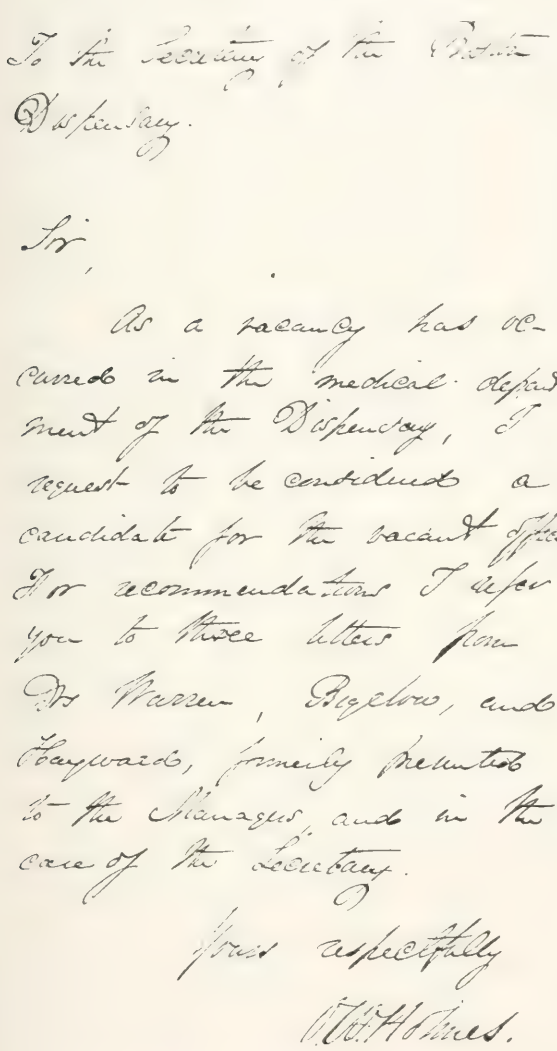
Everybody who works in it, medical and lay, needs not only to be doing his or her work, but to be thinking about it and be transmitting his or her thoughts and suggestions to the central management.

With this ideal in mind, the Boston Dispensary, subject to the general authority of its legally constituted board of managers, has a joint council in which five members of the board, four of the medical staff, and three of the executive officers meet monthly as the central advisory body of the institution on questions of policy and administration.

In the hospital for children in the Boston Dispensary the same principles have been applied to the special problems connected with ward cases. The follow-up system of the hospital does not mean merely fishing up the patient's record at the end of a year after the child's discharge; it means that at the moment of the child's discharge and for not less than a year thereafter, often for several years, the cases are continuously followed through the social service worker attached to the hospital. Regular reports of the child's condition are presented, and, whenever there is need, the child is kept under supervision in the children's out-patient clinic. The stay of a child in the hospital is not regarded as an event complete in itself, but as merely a stage in a continuous process of maintaining and promoting that child's health.

The district physicians of the Boston Dispensary constitute the third main department of this work. Seven men, each of whom receive a salary for part-time service, are appointed. Affiliations are established with the Harvard Medical School and with the Tufts Medical School, and provide for certain fellowships, which give the incumbent teaching opportunities in connection with the district service. The teaching of medical students at the bedside of patients in their homes is a valuable experience for a student, although it must be administered with care

in order to minimize obvious difficulties and objections. Two fellowships are also offered for men desirous of entering public health work, such that the incumbent of these fellowships may work for a degree or certificate in public health, giving half their time to study and half to the district work of the dispensary. This furnishes many opportunities for the practical observation and study of health conditions in the homes.



To the Secretary of the Boston Dispensary.

Sir,

As a vacancy has occurred in the medical department of the Dispensary, I request to be considered a candidate for the vacant office. For recommendations I refer you to three letters from Dr Warren, Bigelow, and Hayward, formerly presented to the Managers, and in the care of the Secretary.

Yours respectfully

O. W. Holmes.

Fig. 2. Facsimile of a letter from Oliver Wendell Holmes, applying for a position on the staff of the Boston Dispensary.

In 1886 the Instructive District Nursing Association of Boston was founded for the purpose of providing visiting nurses for the district physicians of the Boston Dispensary. Now, after more than thirty years of existence, the work of the association has greatly broadened, but nursing for the "district doctors" still constitutes a substantial part of their work.

The war is now facing the Boston Dispensary with new and serious problems. The medical staff will be greatly diminished, owing to enlistment. The higher cost of food, fuel, drugs, and almost all kinds of supplies has increased financial burden as with all hospitals. Higher prices make living conditions harder for wage-earners and for all of small means, and may be expected to bring a growing number of cases of malnutrition, especially among children, and of diseases connected with a poorer food supply. An increase of pressure upon workers in certain industries is already apparent because of war, and is likely to extend much further. A medical institution, during this period of our national life, bears an especial responsibility for conserving one of the nation's most valuable assets: the health of its wage-earners and of its children. Upon the wage-earners, the producers of food, munitions and supplies, we must depend today for success in war as much as upon the soldiers; upon the children the nation must rely tomorrow for its very existence, and any cause which threatens the vitality of its children is a blow at the country's future.

Under these conditions the Boston Dispensary feels an especial call to develop in every possible way its curative and preventive service to children and to expand its work for wage-earners, as by increasing its evening clinics. What other calls the future may hold cannot now be foreseen. An institution which has lived through every one of our country's wars since the Revolution must face the problems of this greatest, and, we trust, the last of all wars, with a courage worthy of its past.

Twelve of the 17 hospitals of Westchester County, New York, have organized the Westchester County Hospital Association, and it is expected that the five other institutions will become members. Mr. C. Arthur Speakman, president of the board of trustees of the Mt. Vernon Hospital, is president of the association; Dr. Robert Denniston, of the Dobbs Ferry Hospital, is vice-president; and Mr. John R. Shillady, executive secretary of the Committee on Cooperation with Red Cross War Relief and Health Agencies of the Westchester County Commission of General Safety, is secretary and treasurer. The new organization is taking up as its first problem the question of encouraging young women to enter training schools for nurses, and the advisability of some of the county's hospitals combining to employ an expert supervising nurse for teaching purposes, this expert to divide her time among several hospitals, none of which might be able alone to support her.

Miss Clara F. Sollenberger, superintendent of the Altoona Hospital, Altoona, Pa., is leaving that institution to take a similar position in the South Carolina Baptist Hospital at Columbia.

INDUSTRIAL WELFARE

A NEW INDUSTRIAL HOSPITAL PLAN

Northeastern Hospital of Philadelphia to Serve Corporations on a Cooperative Basis—Some of the Details

BY BARROW B. LYONS, Financial Executive, Philadelphia.

A cooperative health service is now being developed for the mills in Northeast Philadelphia. Hitherto large plants, such as the Bethlehem Steel Company, the Cadillac Motor Company, and the Norton Grinding Company, have organized company health departments; but a cooperative health department for a number of mills is a new departure in organized medicine. By this means the mill with two hundred employees may receive the same service as the mill with ten thousand employees, for a proportionately less cost.

This is a business proposition—not a charitable one. The mills benefit directly through the increased efficiency of their employees, and indirectly in dollars and cents. The employees benefit through better health and greater earning capacity. While this is a business proposition, the hospital will secure no profit from the organization, but will maintain it on a self-supporting basis.

There will be five classes of service offered at first. They are as follows:

Class A—Workingmen's Compensation Service:

1. Preferential care of employees of cooperating firms when a number of patients are visiting the hospital.
2. Hospital care for bed patients. Fee $1 per day; fees for special care according to a standard list of prices.
3. Instruction in use of first-aid cabinet.

Class B—Medical Inspection:

1. Thorough physical examination of all persons employed, including examination of blood pressure, and urine when patient is over 40 years of age.
2. Thorough examination of all applicants for work, including examination of blood pressure and urine.
3. Reexamination when patients are transferred from one department to another.
4. Cases needing attention to be referred to the patients' private physicians.
5. Monthly report of men examined in each plant.

Class C—Medical Inspection and Treatment:

1. Medical inspection as in Class B, and in addition general medical treatment, including special treatment for eyes, nose, throat, nerves, etc.
2. Monthly report of all cases treated and examined in each plant.

Class D—Medical Treatment and Referred Cases Only:

1. Under this class of treatment only patients would be treated who are referred to the hospital by business firms subscribing to the service.
2. Monthly report of all cases treated in each plant would be made.

Class E—Social Service:

1. A social service worker for each group of factories, employing a total of about 2,500 workers, at monthly salaries of $85 to be paid by mills to hospital on pro rata basis. Social service workers to be in the employ of the hospital.
2. Visits to be paid at home of every worker who does not ring in for work in the morning.
3. Usual social service work in connection with sickness and poverty.
4. Monthly report of work done for each plant.

It needs no argument to prove that an employer insured under the workingmen's compensation law of Pennsylvania ought to receive the full benefit of that insurance by securing the best possible treatment of injured employees.

A special study of handling industrial injuries will be made by the Northeastern Hospital, and it is hoped that suggestions of value for all who treat industrial injuries will be evolved.

The hospital, moreover, on request will give instructions in the use of the first-aid cabinet to persons responsible for their use in firms which send their injured employees to the hospital. An effort will be made to impress upon these cooperating concerns the efficiency of first-aid treatment, particularly in reducing infections from cuts and lacerations, and therefore in reducing the working days lost because of injuries. The necessity of always following first-aid treatment by inspection or treatment by skilled physicians will not, however, be overlooked.

Northeastern Hospital of Philadelphia, Allegheny avenue, erected by Ballinger & Perrot, architects and engineers.

But the need of medical inspection in plants will be emphasized fully as much as the need of treatment for injuries. W. Irving Clark, M. D., who has accomplished remarkable results in increasing the efficiency of employees of the Norton Company and the Norton Grinding Company, of Worcester, Mass., gives the following reasons why physical examination of workingmen is of advantage to the employer:

1. It enables the employer to select men for the work to which they are best physically fitted.
2. It enables the doctor making the examination to instruct and advise employees of any defects which they have and of which they are not aware, and by enlisting their cooperation enables them to overcome these defects where possible, and thus to increase their physical efficiency.
3. It prevents the introduction into the factory of men who are undesirable because of severe defects.
4. It prevents contagious diseases coming into the factory and becoming established there.

The physical advantages to the employees correspond, of course, to the advantages of the employer.

Moreover, Dr. Clark points out that the employee feels, after he has received a physical examination, that the factory is taking a personal interest in his condition and that he can go to the doctor for further advice if he considers it necessary. Dr. Clark believes that this is a very important factor in holding the loyalty of many employees, as the employee is pretty sure to feel that the factory is not employing a man who is not perfectly competent to handle any condition which he may have, whereas he usually cannot afford a family physician.

When a special examination is made each time a man is transferred from one department to another, a periodical

examination of the entire force is not necessary. This examination, when a man is transferred, shows whether or not the man is physically fitted for the new kind of work which he is taking up. Under the system employed by the Norton Company, all men applying to the hospital for treatment are thoroughly examined if there is anything indicating the necessity for such an examination.

Under existing industrial conditions, men are seldom refused work because of their physical condition, except for some very evident defect. Even though all applicants were thoroughly examined, it would not be necessary to reject more men than are rejected at present. The value of the examination would be in giving them work for which they were fitted.

An examination would bring to light many defects which disqualify men for work. Men having vision reduced to one-half in both eyes, others carrying contagious diseases, others having more than second-degree hernia, cases of heart trouble with disturbed compensation, cases of varicose ulcer, cases of fourth- and fifth-degree flatfoot, where the arches apparently give trouble, all would come to light in a physical examination. Even in these times of great labor shortage, working men with such defects are a liability rather than an asset.

The third class of service which the hospital will offer carries to its logical conclusion the second class. Instead of being referred to private physicians as under the second class employees would be treated at the hospital. With the laboratory facilities, special appliances, and the staff of specialists of the hospital, the employee would, as a rule, receive better treatment and would be returned to work more rapidly than if he went to a general practitioner.

In this case the hospital suggests that the funds for meeting the cost of this service be raised through the organization of a mutual benefit society, similar to that of the Cadillac Motor Car Company and the Westinghouse Electric Manufacturing Company. Membership of the employees in this is compulsory and is maintained by small dues collected from their pay envelopes.

In response to letters which the Northeastern Hospital of Philadelphia sent to a number of firms, questioning them as to the value of medical and surgical care of employees, not one answer was received which indicated that the service did not pay for itself. The first question asked was: "Do you find the surgical and medical care of unskilled laborers pays for the service?"

The Cadillac Motor Company, of Detroit, replied to this question: "We are satisfied beyond any doubt that the medical and surgical care of skilled and unskilled laborers more than pays for the service. The medical care is more than justified by the increased efficiency of the men, and the surgical case has proven to be a big economical factor from the standpoint of workingmen's compensation law, and, of course, of greater value from the standpoint of greater efficiency of the working men."

The Brown & Sharpe Manufacturing Company, of Providence, R. I., said: "We do not draw any distinction between skilled and unskilled help, as to the value of medical and surgical care, believing that it is of equal importance for both classes, even more so in the class of unskilled laborers, because of their need of advice and guidance in lines of health safety."

Sears, Roebuck & Company, of Chicago, said: "We have found the medical and surgical care of our unskilled employees a very beneficial affair. We have also found it a paying proposition."

The Solvay Process Company, of Syracuse, N. Y., said: "Medical and social service does not pay in dollars and cents directly; the result is indirectly from the increased efficiency of labor. We believe in that respect it not only pays, but is absolutely necessary, and we are extending this line of work as rapidly as possible."

The fourth class of service offered is merely for the medical treatment of cases which are referred to the hospital by the mills. It would be considerably less expensive than examining all employees and treating them when defects were found, but, on the other hand, it would have no effect in preventing sickness and disease in the factory.

Social service comprises the fifth class which the hospital offers. A social service worker visiting the home of an absent employee on the first day on which he does not report for work would immediately convince the employee and his family of the solicitude of the firm for his welfare, provided, of course, the social service worker were tactful and sympathetic. Moreover, it would tend to prevent employees from staying home because of slight illnesses or simply because they did not feel like working. It would also make prompt medical assistance possible, and check in the beginning many diseases which, if not promptly treated, would become more serious.

In regard to social service work, the Solvay Process Company said: "We of course have a social service department, and believe it to be as necessary as any other department."

The Brown & Sharpe Manufacturing Company replied: "We have an industrial department which cares for social service work, and believe that it is of growing importance to give consideration to matters which naturally come under this heading."

The Cadillac Motor Car Company said: "About the only work we do along this line is done by our visiting nurse, who is a graduate of one of the local hospital training schools, and who is giving her special attention to the home conditions and physical illness of the young women employees. This work has not been extended to our shop employees."

In planning for the new Northeastern Hospital of Philadelphia, the idea was to organize an institution which would render 100 percent efficient returns for the money invested. For this reason an industrial dispensary rather than a large general hospital was determined upon. Those who know the mill districts of Kensington and Port Richmond in Philadelphia fully realize the great public necessity for an institution which will prevent disease and teach healthier living rather than simply cure disease.

In order to treat our dispensary patients needing hospital care, and to care for people injured in the mills, a small but well-equipped general hospital will be maintained in connection with the dispensary. The institution will not only care for such cases as are brought to it for treatment, but will also actively seek out the causes of disease in the homes and the mills. To do this, we intend to organize a department for the prevention of disease. As a result of its investigations, it will make recommendations to the health department, the schools, and the mill owners, and endeavor to have its suggestions put into effect.

The plans for the department for the prevention of disease have not yet been thoroughly worked out. The intention is to secure the services of an epidemiologist to head the department. Not only preventive work in the homes of the neighborhood, but in the mills, will be undertaken. Occupational diseases will be studied in connection with the health inspection in the mills.

Although the plant of the new hospital will not be large, its use will be intensive.

BOOK REVIEWS

Social Diagnosis. By Mary E. Richmond, Director Charity Organization Department Russell Sage Foundation, Author of "The Good Neighbor," etc. Pp. 511. Cloth, price $2.50. Russell Sage Foundation, New York, 1917.

This book is the result of studies which Miss Richmond began fifteen years ago. She says:

"With other practitioners—with physicians and lawyers, for example—there was always a basis of knowledge held in common. If a neurologist had occasion to confer with a surgeon, each could assume in the other a mastery of the elements of a whole group of basis sciences and of the formulated and transmitted experience of his own guild besides. But what common knowledge could social workers assume in like case? This was my query of fifteen years ago. It seemed to me then, and it is still my opinion, that the elements of social diagnosis, if formulated, should constitute a part of the ground which all social case workers could occupy in common, and that it should become possible in time to take for granted, in every social practitioner, a knowledge and mastery of those elements, and of the modifications in them which each decade of practice would surely bring."

Miss Richmond disclaims the idea that book knowledge is sufficient to make an efficient social worker; yet, she insists, ordered knowledge must supplement inspiration.

The material for the book has evidently been drawn from a rich experience; the treatment is open-minded and undogmatic.

Basic Quantity Food Tables to Be Used in Determining the Daily Issue of Food to the Kitchen. Prepared for the use of institutions by the Department of Public Charities, City of New York, July, 1917. John A. Kingsbury, Commissioner; Henry C. Wright, First Deputy Commissioner; Louis J. McNally, Departmental Steward. Pp. 120. Cloth. Price, $1.25 postpaid. For distribution by the Municipal Reference Library, 512 Municipal Building.

All large public institutions have long felt the need of a better and more definite control of their food issue and consumption. This need has evidently impressed itself upon the Department of Public Charities of New York City, and the department has met the issue by compiling and publishing a book of tables, which sets forth the exact amount of issues of all foods to be used for any given number of persons. The book has a separate table for each of the following classes: officers and staff; nurses; other employees; hospital patients and inmates of homes for the aged; tuberculosis patients; feeble-minded inmates and patients; children in hospitals; lodgers at municipal lodging house; industrial workers at municipal lodging house.

These tables will save an enormous amount of calculation daily that has heretofore been necessary in figuring the total amount of each article of food to be distributed to the patients. With these tables in hand, all that the dietitian or steward need do is to turn to the page and column headed by the nearest number approximating the actual number to be fed, and there will be found the number of ounces or pounds of the article or articles to be distributed. The total amount to be distributed, of course, is based upon a definite per capita which is set forth in the table. These per capitas are the combined experience of the Department of Public Charities and the other departments in New York City operating public institutions, and inasmuch as they have proved of practical service during years of operation, they should be a distinct guide to any public institution.

These tables, if adopted generally by public institutions, might readily be incidental in the saving of vast quantities of food. Not only would such an accurate basis enable the superintendent to control the maximum amount distributed, but it would also assure the superintendent that a sufficient and proper amount were furnished to his patients or inmates. These tables, when combined with the food waste system, which is also in operation in the Department of Public Charities, give information of greatest value to a central department or to a superintendent of an institution. The one in control can be assured that a proper distribution of food is taking place, and he has in hand a basis with which he can check up issues at any time.

These tables are the outcome of an inquiry into public institutions throughout the country which was made by Henry C. Wright in 1910 and 1911 and published under the title of "Fiscal Control of State Institutions." Mr. Wright has, subsequent to that time, become first deputy commissioner of public charities, New York City, and the shortcomings which he found in the handling of the food problem throughout the country he has attempted to overcome in his administration of these matters in the institutions of New York City. Thus the tables, in a sense, are the outcome of nearly ten years of work with public institutions on the part of Mr. Wright.

English-Italian Phrase Book for Social Workers. A Phrase Book for the Use of Social Workers, Teachers, Physicians, and Nurses. By Edith Waller. Pp. 178. Paper, price 75 cents. Edith Waller, Morristown, N. J., 1916.

English-Italian Phrase book for Social Workers—Physicians' Supplement. By Edith Waller. Pp. 19. Paper, price 25 cents. Edith Waller, Morristown, N. J., 1916.

This book and its Physicians' Supplement are intended for the use of social workers and others who have some acquaintance with the Italian language. The phrases and the vocabulary have been well chosen. It would have been better, however, if the English and Italian versions had corresponded in the position of sentences, which is not always the case.

Books Received for Review

Medical and Surgical Reports of the Episcopal Hospital, Philadelphia. Vol. IV; 106 illustrations. Philadelphia, 1916.

Society and Prisons. Some Suggestions for a new Penology. By Thomas Mott Osborne, L. H. D. Pp. 246. Cloth. Price, $1.35 net. Yale University Press, New Haven, Conn., 1916.

The Castle of Cheer. By Charles Henry Lerrigo, author of "Doc Williams," etc. Pp. 304, with 2 illustrations. Cloth, price $1.25 net. Fleming H. Revell Company, New York, Chicago, Toronto, London, Edinburgh, 1916.

The Aftermath of Battle. With the Red Cross in France. By Edward D. Toland, with a preface by Owen Wister. Pp. 175, with illustrations. Cloth, price $1.00. The MacMillan Company, New York, 1916.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

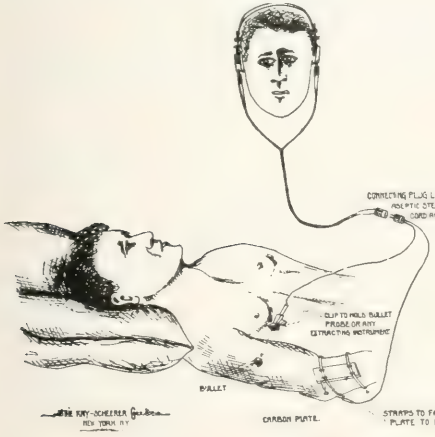
Electric Bullet Detector

This apparatus was developed under the direction of Dr. Mackenzie-Davidson of the British Medical Corps.

The instrument relies on a carbon plate being placed in contact with the human body as a positive element.

The materials used in the manufacture of bullets, shells, etc., are electronegative, and any particles within the human body form the negative element, therefore it will be found that the body itself forms the electrolyte. By completing the circuit between the two poles, a current is produced sufficiently strong to operate the detector.

After adjusting the headband and the receivers to the ear, a distinct sound is audible when a fragment of shell



Mackenzie-Davidson electric bullet detector.

or other metallic body is touched by the instrument which the operator has connected to the clamp supplied for the purpose.

The advantages claimed for this detector are: that it has no battery of any kind; that it is simple in construction, and that it will absolutely distinguish between metallic fragments and pieces of fractured bone. The device can be operated in conjunction with any bullet probe, forceps, or other surgical instruments, the use of which would be required under the circumstances.

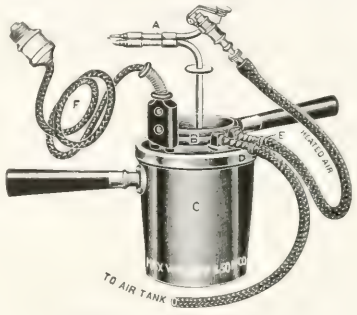
The portions coming in contact with the wound can be readily cleaned and sterilized.

Electrically Heated Paraffine Atomizer

This apparatus has been designed for the purpose of spraying Ambrine, Redintol, Parresine, Stanolind Surgical Wax, and other compounds used for dressing burns and granulated wounds.

The device consists of a copper, nickel-plated water container in which is also placed the electric heating unit for heating the water and the copper coil for the passage of compressed air. A removable container for holding the compound to be heated is placed into the outer vessel.

Where the electric current is not available, hot water may be used to melt the paraffine or other compound, and, even when electricity is used for heating, it is advisable to fill the container first with hot water rather than with cold water, for the reason that the higher temperature de-



Paraffine atomizer, electrically heated.

veloped by the heating unit will be available in a much shorter space of time.

The electric heating unit is set at 180 Fahrenheit, but it is estimated that the compressed air will reduce the temperature at the point of the spray from 20 to 30 degrees, and the degree of heat should be ascertained before the spray is used, and if it is too hot, the electric unit can be shut off.

With the use of heated compressed air such as this apparatus produces, the compound does not cool so quickly in the process of spraying and does not clog the tubes. The atomizer is held loose in the solution, and when spraying is completed it should be immediately withdrawn and air blown through the tubes in order to have the apparatus ready for future use.

Milk and Buttermilk Cooler

At this time of the year, we believe, there may be some of our readers who feel the need of some apparatus which will enable them to keep and dispense their milk and buttermilk in the most approved and sanitary fashion.

The "C. & H." milk and buttermilk cooler illustrated here is an apparatus which can be recommended for this purpose. The indurated fiberware container is a non-conductor of heat or cold, and consequently keeps the contents at the proper temperature at a minimum consumption of ice. The ice never comes in contact with the beverage, which is drawn through a non-clogging, non-corrosive faucet, thus making the cooler absolutely sanitary. A sanitary wooden dash (made of hard maple) prevents the lumps in the buttermilk from staying in one place. All of the liquid can be drawn from the cooler without disassembling it, making it easy to clean.

The cooler can easily be kept clean with warm water, a cloth, and a special brush furnished with it to clean the faucet.

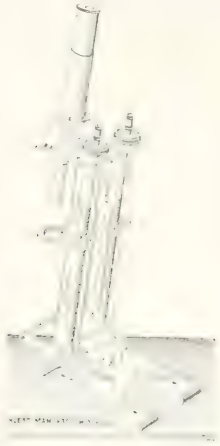
The earthenware interior jar is made of the same kind of earthenware as used in the old-fashioned churn.

Courtesy & Hayes milk and buttermilk cooler.

The coolers are furnished in four sizes with a capacity of the interior reservoir of approximately 1, 2, 2½, and 5 gallons. The outside of the apparatus is finished in white enamel.

Nephelometry

One of the most useful and widely spreading methods of chemical analysis recently developed is called nephelometry. The latest word in the construction of the nephelometers, the instrument used in the method, is brought out in a recent article by Kober (*Journal of Biological Chemistry*, 1917, XXIX, 155), the essential details of which are shown in the illustrations. The instrument is produced in this country.



This new system of analysis, which shortens the time required for many determinations, does not demand an extensive knowledge of chemical technic. Results obtainable only after days in a laboratory can now be secured in a few minutes. Thus, the method is of value to clinicians who wish to obtain accurate results quickly for use in diagnosis and to those who have a deep interest in the causes of health and disease and who have little time for research.

Already the development of new and improved technic of many analysis has awakened among medical men a widespread interest in chemistry. But it is the duty of the pathologist so to shorten and simplify the process of analysis that it is possible for many clinicians to gather data which will throw light on the normal and abnormal conditions of the body for immediate or future use.

The chief basis of quantitative work is at present gravimetric analysis—filtering, washing, and weighing of precipitates. In all branches of chemistry and in physiological work particularly, this is a long, tedious process and often inaccurate, owing to the colloidal nature of the precipitates, and is largely responsible for the time consumed in analyzing.

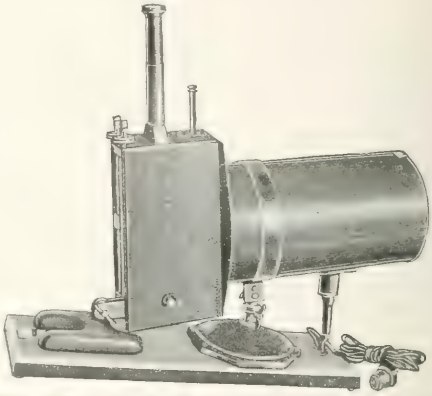


Fig. 2. Kober colorimeter with nephelometric and colorimetric lamp.

The place of volumetric analysis is already well known in acidity titration and in the estimation of chlorides and phosphates in urine, for example: Recently colorimetric analysis has been developed. Colors are produced and are estimated much as in oxyhemoglobin estimation by comparison with a known standard. Thus Folin has reduced to a clinical form the estimation of total nitrogen, urea, ammonia, uric acid, creatine, and creatinine, through such colorimetric reactions.

It is now proposed to add a photometric method of analysis called "nephelometry." The basis of the method is the measurement of the brightness of light reflected by a cloud—in other words, by the particles in suspension—very much like in an ultramicroscope. The intensity of the light reflected is a function of the quantity of suspended particles when other conditions are constant.

Dr. John C. Carmer, of Lyons, N. Y., opened a new hospital at that place September 1. The institution is to be called the "Edward J. Barber Hospital," being named for Edward J. Barber, vice-president of the Barber Steamship Company, of New York city, and a personal friend of Dr. Carmer. The hospital is open to all reputable physicians. Miss Elizabeth Hennesey, formerly assistant superintendent of a hospital at Brattleboro, Vt., is in charge.

A new home for the Huntington County Hospital, Huntington, Ind., was opened September 3. The building cost $52,000.

STANDARDIZATION OF HOSPITALS

Joint Session of the International and State Committees on Standards of the American College of Surgeons, Chicago, October 19-20, 1917

Last month announcement was made of a great meeting of physicians and hospital people in Chicago to confer on standardization of hospitals, under the auspices of the Clinical Congress of Surgeons of North America and the American College of Surgeons. The program had not been completed at the time our last number went to press. It has been completed now and follows:

I. HOSPITALS AS THEY ARE

1. The Problem of Standardization—Dr. Franklin H. Martin, Chicago.
2. Types of Hospitals, Numbers, Distribution, Ratio of Beds to Population, etc. (large maps, charts, etc.) Dr. J. A. Hornsby, Chicago.
3. Relation of the Hospital to Its Community—President Henry A. Suzzallo, University of Washington, Seattle.

II. WHAT THE PROFESSION OF MEDICINE WANTS IN HOSPITALS

October 19, 2:00 p. m.

1. Organization and Efficiency—Dr. Christian R. Holmes, Cincinnati.
2. The Laboratory—Dr. William H. Welch, Baltimore.
3. Case Records and Their Value—Dr. Ernest A. Codman, Boston.
4. The Educational Responsibility of the Hospital to the Profession and to the Community—Dr. Allen B. Kanavel, Chicago.
5. The Trained Nurse—Dr. Anna Goodrich, New York.

III. WHAT TO DO—FIRST STEPS

October 19, 8:00 p. m.

1. Exact Data Essential as a Basis for Standardization of Hospitals—(a) Discussion opened by John G. Bowman, Chicago; (b) On Behalf of the American Hospital Association—Dr. W. L. Babcock, Detroit; (c) On Behalf of the Catholic Hospital Association—Father C. B. Moulinier, S. J., Milwaukee; (d) On Behalf of Research in Medicine and Surgery—Dr. Charles B. Mayo, Rochester, Minn.; (e) On Behalf of Medical Schools—Speaker not selected.

IV. WHAT TO DO AND HOW TO DO IT

October 20, 10:00 a. m.

1. State Committee on Standards and Their Work in Connection with Medical Societies, Hospital Governing Boards, and Hospital Superintendents—Dr. William D. Haggard, Nashville.
2. Closing Summary—Dr. George W. Crile, Cleveland.

V. AROUND THE TABLE

Dinner to Committeemenand Guests, 7:30 Saturday evening, October 20. Program not announced in advance.

It is intended by Dr. Franklin H. Martin, general secretary of the Clinical Congress, and by Dr. John H. Bowman, director of the American College of Surgeons, to invite about 300 leading surgeons and physicians of the country who are recognized in connection with their hospital work, and it is already assured that nearly all these men will be present, especially since the Clinical Congress takes place two days later, also in Chicago.

There have been invited also a number of the leading hospital men of the country, who have been asked to participate in the conference.

The chief purpose of the meeting is to arrive at some methods by which the problem of standardization of hospitals may be approached, and those who have already given serious consideration to the matter are under the impression that it will be wise to divide the country into definite districts and subdistricts. Each state of the Union will be a working district. There is to be a committee of three or five members of the medical profession and hospital leaders, who will act as the executive committee for the state. Under this committee each county is to be organized with a subcommittee for the county.

Approximately $40,000 has been appropriated by the American College of Surgeons for beginning the work.

As will be noted in the program, the conference to be held October 19 and 20 is divided into three essential parts: (1) the hospitals as they are; (2) what the hospitals need; and (3) how is the result to be brought about? This promises to be an epochal conference and one of vital interest to all the hospitals.

ARTIFICIAL DAYLIGHT IN SURGERY

Nearest Approach to Daylight Desirable Where Color Discrimination Is Required—A Study in Color Development

BY M. LUCKIESCH, Applied Science Department of The National Lamp Works, Cleveland.

Visual discrimination depends upon differences in brightness and in color; therefore the perception of color is important in most visual activities. However, except in viewing highly colored objects, such as rugs and paintings, we are usually unconscious of the part which color differences play in ordinary vision. This unconscious utilization of the gift of color vision becomes exceedingly evident through a general study of lighting and vision.[1]

It is a fundamental fact of the science of color that, in general, no colored object will appear the same under two different illuminants. In the case of a variegated colored object, the brightness relations of the different colors are altered as well as the hues. It is not unusual to experience helplessness in forming judgments in examining colored objects under ordinary artificial light, because, for several reasons, we have accepted the appearances of colors under natural daylight as standard. It appears needless to discuss the reasons why natural daylight possesses the most generally desirable quality or spectral character for purposes of color discrimination because everyone may draw upon his own experiences for such evidence. However, natural daylight has some disadvantages, for it is not constant in quality and intensity, and it is often unavailable when desired. These facts and others have been responsible for a growing demand for an artificial illuminant which approximates natural daylight in spectral composition—an artificial daylight.

Owing the variability of the spectral composition of daylight, it was necessary to determine average conditions before attempting to reproduce the spectrum of natural daylight by artificial means. The light from clear north sky is quite constant in spectral composition and fairly constant in intensity throughout a large portion of the day. Largely for these reasons, north skylight has been quite popular for accurate color work. Clear noon sunlight is also a fairly constant illuminant, which is more generally considered by physicists to be white in color. In comparison with noon sunlight, north skylight is decidedly bluish in hue. If we could integrate the color of total daylight from sunrise to sunset, we would arrive at a mean color perhaps quite different from either clear noon sunlight or north skylight.

For the preceding reasons and others, the development of artificial daylight units has not been confined to the reproduction of a single daylight quality, but has included several qualities of daylight. Artificial north skylight units are available for the most accurate color work. The essential parts of these accessories are a metal housing, a Trutint glass filter, and a light source. Owing to their steadiness, high efficiency, and convenience, Mazda C lamps are generally used in these so-called color-matching units. These units have been developed for the purpose of meeting the requirements of the most exacting color work, but

[1]Luckiesch, M.: Light and Shade and Their Applications; Color and Its Applications. Van Nostrand Company.

this highly accurate color discrimination is confined to a small portion of the entire field, and, therefore, for a vast range of activities in which color perception is utilized consciously or unconsciously, a less accurate approximation to daylight quality is necessary. Furthermore, outside this relatively smaller field of accurate color discrimination, the eyes are not so highly trained; therefore so-called Trutint sunlight units and also Mazda C-2 lamps serve the needs very well. These units are also more efficient than the color-matching units, and may be used for the general lighting of large areas.

At the present time thousands of Trutint units and several hundred thousand Mazda C-2 lamps are in operation in commercial and industrial activities. Many of these are in use in surgery and medicine for the general illumination of operating rooms and for purposes of medical examination. They combine the advantages of daylight quality of light and reliability. As previously stated, the perception of color enters into the process of visual discrimination to a surprising extent. For example, the manifestations of skin diseases are judged to a large extent by color, and a judgment of such a condition is arrived at more or less falteringly under ordinary artificial light. Flesh tints vary in color, and healthy and diseased tissues are discriminated largely through differences in color. The color of flesh tissue is usually quite different under ordinary artificial light than under daylight, and usually there are not such apparent differences between the various flesh tints under the former illuminant as under the latter. In microscopy the same conditions arise with the additional difficulties arising from the uncertainties in recognizing stains under ordinary artificial light.

It appears unnecessary to describe the present installations in detail, because medical men doubtless fully appreciate the advantages of such illuminants. In most cases the Mazda C-2 lamp appears to be satisfactory, and it possesses the advantage of being easily installed. However, for localized lighting, the Trutint color-matching unit is in use in a number of cases for the purpose of diagnosis. In dentistry, microscopy, and other laboratory work, these various units also have found application.

COUNTRY HOSPITALS FOR CANADA

Crying Need for Medical Skill and Nursing Care in Sparsely Settled Districts—Government-Supported Hospitals Only Solution

A committee appointed by the National (Canadian) Council of Women to investigate the need of skilled maternity care for the young mothers in the sparsely settled districts has rendered a report, which is published in a recent number of the *Canadian Nurse*. The committee finds the need for more medical skill and nursing care in the remote and thinly settled portions of Canada to be very great. Thousands of women have no other care than that furnished by their husbands or by kindly neighbors; sometimes they have passed successfully through childbirth without even this aid. In many cases, however, physical defects and the hard life of the women on the homesteads produce conditions which endanger the life and health of mother or child, or both. Moreover, it is often impossible for the mothers to stay in bed the requisite number of days.

The need is so vast that the Victorian Order of Nurses barely touches its fringe, although a number of country branches have been opened during the past two years, and some new hospitals established from which nurses are sent out. The extension of the Victorian Order would do much to relieve the situation, but could not completely meet the demand, because the need for more experienced medical skill is as great as that for nursing care. Not maternity only, but accidents, organic diseases, fever, etc., need to be provided for, and this irrespective of the financial condition of the patients. The only solution, in the committee's opinion, is the provision by the dominion and provincial governments of a system of small hospitals. The committee says:

"The solution of the whole problem, in the opinion of your committee, is the provision of small country hospitals, with qualified and competent nurses in charge and medical skill available, the hospital to furnish both nursing accommodation to all patients who can come in, and a home for a staff of visiting nurses who go out to those patients who from various causes are unable to leave their homes.

"This is a large scheme and could only be undertaken successfully by the governments.

"The dominion and provincial governments spend much time and money in conservation of animal and forest life, and in assisting agriculture, mining, and other industries. They have hitherto overlooked to a great extent the preservation of human life, which is, without doubt, the most important of all.

"If a man has a sick beast he can claim the services of a veterinary at the expense of the government, but a sick member of his family is without any such claim.

"The government, dominion and provincial, should be asked to provide medical and nursing care not only for the mothers, but also for the fathers, sons, and daughters, in the outlying districts.

"In Manitoba the provincial government has appointed six nurses for welfare work in the outlying districts. Their work is purely educational, and their object the conservation of child life.

"They are also expected to educate the public along such lines as hygiene, prevention of contagious diseases, etc. They will accomplish much work if they can teach the husbands and fathers that child-birth, though a natural function, does need care and sufficient rest to make a good recovery. Many women complain that they cannot rest after the baby is born on account of the household tasks. The fathers at such times should do the necessary work and make the bread.

"The life of the wife and child of a large number of these settlers is not as valuable in their eyes as it should be. There is need of education along these lines.

"In Alberta a free public hospital league has been organized, and it is the intention of the league to petition the government of Alberta to establish free public hospitals.

"The idea is to form a chain of small hospitals, the cost to be borne by a tax of one cent an acre on all lands, the hospitals to be free as schools are free, kept up as schools are, and placed as schools are placed, wherever there is need, and not more than twenty or forty miles apart.

"In closing this report your committee would like to state they are convinced that any scheme undertaken to help the sick in the sparsely settled districts, to be successful, must have the authority of the government as well as its financial aid."

A new home for the nurses of the Thomas D. Dee Memorial Hospital at Ogden, Utah, was dedicated the last week in August. The building, with its furnishings, cost $35,000, and has accommodations for 50 nurses.

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. IX *November, 1917* No. 5

THE CONTAGIOUS DISEASE HOSPITAL FOR IMMIGRANTS AT ELLIS ISLAND, N. Y.

The Scope and Special Problems—Small Isolation Units—Low Incidence of Cross-Infection—Special Advantage in Isolating Children—Method of Transporting Patients—Routine Followed in Making Admissions

By J. G. WILSON, M. D., U. S. Public Health Service, Ellis Island, New York

I. FUNCTIONS AND SPECIAL PROBLEMS OF THE HOSPITAL

THIS hospital is exclusively for the treatment of immigrants arriving at the port of New York. It is situated on an artificial island of about four acres in the upper bay of New York Harbor. The island is one of three, which, connected by bridges, constitute the whole of Ellis Island.

Although opened to receive patients in June, 1911, the hospital is still in the process of making, large wards being divided into smaller, and interior alterations being made in order to evolve gradually a more perfect system of isolation units.

The custody of the buildings and the buying of all supplies is under the direct supervision of the immigration officials, who are government employees in the Department of Labor. The internal administration and the professional care of patients are conducted by a medical officer of the United States Public Health Service, which is a bureau attached to the Treasury Department.

In the six years of the existence of the hospital there have been over seven thousand patients received for diagnosis and treatment. The admissions have varied greatly from month to month and from year to year, being influenced by the fluctuation in immigration as well as the usual periodicity of epidemic diseases.

The great irregularity of admissions constitutes the chief special problems which the hospital has to meet. Sometimes with less than an hour's warning more than fifty patients will be landed, suffering from different contagious diseases. These must be admitted at once, and the problem of keeping the different kinds of infection separated is immediately presented. Its solution depends upon (1) an adequate supply of isolation units; (2) correct primary diagnosis whenever possible; (3) a rigid antiseptic technic in the admission, nursing, and treatment of the patient. These conditions can be met only when the medical officers and nurses in charge are provided with proper facilities. Although the incidence of cross-infection contracted in hospital has not entirely ceased, it has reached such a low point (for the past year 0.63 percent of all admissions) that it is believed a description of the hospital, with special reference to the provisions to prevent the spread of disease, will be found interesting and instructive.

II. GENERAL PLAN OF WARDS AND ADMINISTRATION BUILDINGS

There are eight separate two-story buildings projecting at right angles from the main corridor which runs through the center. Four of these buildings have a northern and four a southern exposure. The space between the buildings is sufficient to secure good ventilation and plenty of sunlight, even in the buildings with northern exposure. There are two wards in each building, each 55 feet long by 27 feet wide. One of these wards is on the ground floor and one on the second floor. Besides the wards mentioned, there is a central building on the north side of the corridor in which the nurses are quartered and which also contains

the operating room and dining room for all nurses and attendants. Opposite this central building on the south side of the corridor is the kitchen, which supplies the food for the whole hospital, including personnel and patients. At the west end of the corridor, situated near the admission gate to the island, is the office and administration building, the laboratory, the morgue, the laundry, the power house, and sleeping quarters for ward maids and attendants. At the east end of the corridor is the private dwelling for the medical officer in immediate charge of the hospital. Scattered on the campus in this section are three one-story-and-a-half buildings, which were originally designed for the isolation of scarlet fever and diphtheria patients, but which have never been used for that purpose and have been utilized as living and sleeping quarters for certain of the hospital personnel.

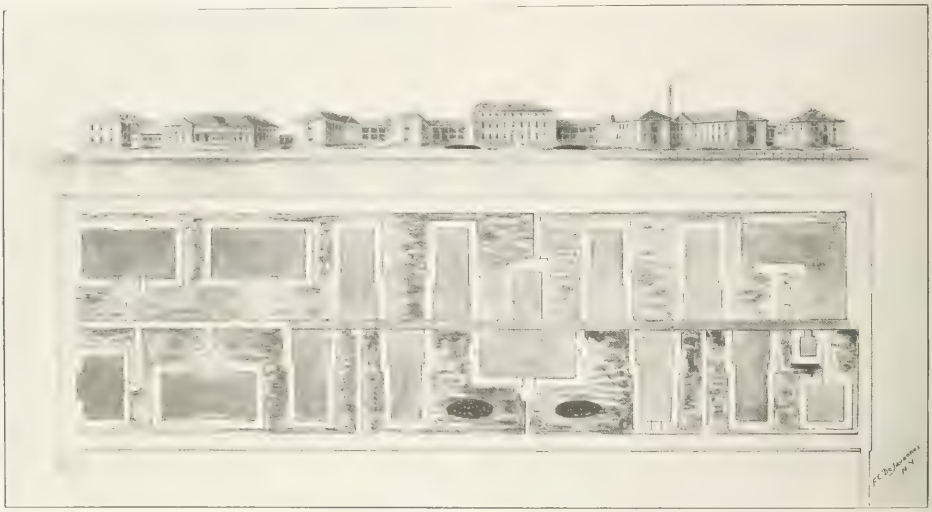


Fig. 1. View and ground floor plan of the Contagious Disease Hospital for Immigrants at Ellis Island, New York.

If it were possible to utilize for ward purposes all the fourteen wards in the eight buildings, there would be capacity for 321 adult patients, or 364 children 3 to 4 years of age, or 560 children of less than 3 years. This estimate is based on an allowance of 45 square feet of floor space for each child 3 to 4 years of age, 65 square feet for children over 4, and 80 square feet for adults. The height of the walls is sufficient to give a cubic air space of over 1,000 feet per adult and a correspondingly liberal amount for children. With the usual distribution of adults and children, the capacity of the sixteen wards is about 400 beds.

Although there are theoretically accommodations for the above-mentioned number of patients, the actual number which can be treated properly is less than half that number. The reason for this lies in the fact that the number of isolation rooms is inadequate. Fortunately, there have seldom been over 150 patients in the hospital at any one time. Should it become necessary to accommodate more, all the wards on the ground floor could be cut up into cubicles, the upper-story wards being used for convalescent patients only, thus practically doubling the isolation facilities.

As the hospital is actually administered there are only eight wards in use for patients with contagious diseases.[1] These are situated at the western end of the central corridor. Two of these on the ground floor are cut up into small units which accommodate from 3 to 5 cribs each. There are fourteen of these small units. In 1915 another ground-floor ward was cut up into twelve one-bed units (Fig. 2). Besides the small units, there is, in every one of the eight wards, an isolation room capable of accommodating two patients. There are, then, all told, thirty-four small units available, which are designed to accommodate from one to five patients each, and four wards 55 feet by 27 feet, each one of which has a capacity of either fifteen adults, twenty-eight children 3 to 4 years old, or thirty-three infants.

As patients with different diseases are mixed together in the steerage and on landing, it be-

[1]This refers to the wards used for contagious disease proper, relatives accompanying children with such diseases, and patients admitted for observation on account of known or suspected contact with contagious disease. It does not include three wards used for tuberculosis patients, nor one ward occasionally used to accommodate patients who are undergoing examination for intestinal parasites and trachoma.

comes necessary to isolate practically every new admission for a more or less extended period of observation. Owing to the great prevalence of cross-infections on arrival and to the fact that a reliable history either of the present illness or of previous infectious diseases is never obtainable from the immigrant, the above-described isolation facilities, which at first glance appear unusually adequate, are as a matter of fact not sufficient for the proper sorting and grouping of 150 patients of the character usually admitted. However, since the twelve additional units were obtained by the subdivision of a large ward in 1915, it has been possible to inaugurate a uniform system of isolation, which it has only occasionally been necessary to abandon. It is believed that, were small units increased to such a point that large convalescent wards could be totally dispensed with, the incidence of cross-infection contracted in the hospital would practically cease.

III. THE SMALL UNIT

Although these units were primarily designed for one patient only, they are large enough to hold two beds if emergency arises which necessitates abandonment of the plan of strict isolation of each individual. When the rooms are thus utilized, care is taken to place children together who not only have the same diseases, but also have been previously associated. Examples of such cases are those on which two children of the same family are admitted to the hospital at about the same time, or in which a mother accompanies a nursing infant.

Each unit has running hot and cold water, a drop-light attachment so that examination of eardrums can be made in the room, a steam radiator, an indirect electric light in the ceiling which can be switched on or off by pressing a button just outside the room door, and a small shelf placed high above the washstand, entirely out of reach of any child. The furniture in the room consists solely of an iron bed or crib and a small low chair. Every morning a fresh paper bag is hung by a small strip of adhesive plaster from the shelf. This bag is to receive used dressings, antitoxin containers, throat swabs, and everything else which has been used in the room and which can be of no further service. The bags are collected daily and taken to a large incinerator where debris and garbage for the whole of Ellis Island is destroyed.

On the shelf are kept any special medicines or appliances needed for the individual case, a clinical thermometer, and a comb. A small chamber is kept under the bed.

A strip of clean white muslin, 18 inches wide, is tacked over the lower portion of the window frame to act as a wind shield and allow the window to be partly open for ventilation. A room thermometer hangs on the wall near the door in such a position that it can be read without entering the room. The temperature is kept at from 68 to 70 F.

There are six of these rooms in a row on each side of a common hallway. Each room has a door with a large glass window. The doors all open inward and are so arranged that no two are opposite each other. There is no attempt made to keep the doors shut except in special cases in which it seems desirable to do so in order to insure absolute quiet for the patient. If a child is not sick enough to be kept in bed, he is prevented from leaving the room by placing a removable wooden gate in the doorway, which allows him to see out into the hallway through perpendicular slats.

The rooms all have a large immovable glass window in the partition between them, so that it

Fig. 2. One of the isolation units at the Ellis Island Contagious Disease Hospital for Immigrants.

is possible for the nurse to see the patients in six rooms at the same time. The beds are placed next to these partition windows, and convalescent children soon begin to play with each other through these windows without the danger of any direct contact. Children in this system of small units are the happiest in the hospital. Experience has proved that there is more contentment where they can see each other and see what is going on around them without coming in actual contact than there is where they all mingle freely together in a common ward. As practically all quarrels among small children have their origin in the effort which one child makes to take away forcibly from another child some object which it desires

for itself, the reason why more happiness exists here is apparent.

In the hallway between the two sets of isolation rooms are placed several basins containing 2 percent creolin solution. These basins are used for washing the hands and also for the immersion of instruments or utensils which have to be carried out of the room. Just outside every room hang three gowns and caps. One of these is for the doctor, one for the nurse, and one for the ward maid. Clean gowns are supplied daily.

This system of twelve rooms and a common hallway is served by one bathroom for bathing newly arrived patients and one bathroom with appliances for the application of hydrotherapy. There is also a ward kitchen, a linen room, a large toilet room, and a small sink closet. The nurse's office is a room situated in line with the isolation

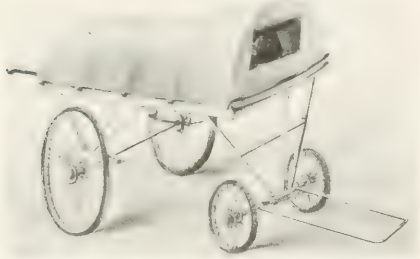


Fig. . Hand ambulance for transporting patients to the Contagious Disease Hospital. The top is removable. The mica window in front permits observation of the patient even when he is completely covered.

rooms on one side of the hallway, and through the inside window of this office she can see half of the whole system at one time.

The two other wards, which are divided into small units of from three to five beds each, are arranged on the same general plan as the one just described. They differ, however, not only in the fact that the units are larger, but also in that they are not so well arranged as regards windows between the rooms and are not provided with such good facilities for bathing and hydrotherapy.

IV. ADMISSION

The patients are sent to the contagious disease hospital from the detention rooms in the immigration administration building, from the medical examination rooms, the primary medical inspection line in the same building, the general hospital, or direct from the immigrant [illegible]

These sources of admission are all from 150 to 300 yards distant, and the transportation must be effected through passageways and over bridges exposed to the open air. To meet these conditions, hand ambulances, such as depicted in Fig. 3, have been devised. The prairie schooner top can be removed entirely or in part as desired, and the mica glass window in the front end allows observation of the patient even when he is completely covered. The whole ambulance can be stripped of bedding, and the framework and top washed down with the hose within five minutes.

When an ambulance call comes, a male attendant is sent to the sterilization room to dress the ambulance with sterile blankets and pillows. He first slips on a long white gown, which completely covers his clothing. After preparing the ambulance he goes for the patient, whom he brings to a small room at the west end of the corridor, and notifies the admitting officer by telephone that a patient awaits his orders. The admitting officer informs him what isolation unit is ready to receive the patient. If there are no isolation rooms available, the admitting officer goes immediately to see the patient, makes a diagnosis if possible, and assigns the patient to a ward or room with other patients where it is believed the danger of mutual cross-infection will be the least.

As soon as the patient is taken to the ward, the nurse in charge sees that he is placed in the bathroom, and she and the ward maid together undress him and list his clothes and valuables on the back of the admission sheet. All clothes are put in a bag, which is labeled with the patient's name and taken to the sterilizing room. Dirty underclothes are turned in to the laundry from this room. All other clothes are put into the steam sterilizer. The child, undressed, is now thoroughly bathed in the tub, and tincture of larkspur applied to the head as a routine measure. After a bath the child is dressed in clean night clothes and placed in his crib in the isolation room. As soon as he is in bed, the nurse takes his pulse, temperature, and respiration, labels a Loeffler's blood serum tube with the patient's name, the date and number of the ward, and in the case of little girls takes a vaginal smear. She now notifies the doctor in charge of the ward that a new patient is awaiting examination. The doctor makes this examination with as little delay as possible. He takes a nose and throat culture at the time of the examination, and this together with the vaginal smear is at once sent to the laboratory by the ward maid.

In the event that many patients are being admitted to the same ward at the same time or in rapid succession, they are put in their individual isolation units fully dressed, to await their turn in the bathroom. Between patients the bathroom is mopped out with hot water and the tub scrubbed with 2 percent creolin solution.

There is no effort made to confine the same dis-

eases to the same wards. All are admitted indiscriminately to any ward, but are carefully kept from direct contact with each other by means of the isolation units already described. When it is necessary to place a new admission with other patients whose status as diphtheria carriers has not yet been determined, a Schick test is done, but antitoxin is never administered unless there is either *clinical* signs of diphtheria or known exposure to the same. Following is a specimen admission sheet filled out in the usual manner:

U. S. IMMIGRANT HOSPITAL

Name, *Giuseppa Catrona.*
Age, *4 years;* Nativity, *Italy;* Sex, *female.* No. *839.*
Arrived *July 9, 1915;* Admitted *July 23, 1915;* ex SS., *Duca D'Aosta*
Manifest *Not manifested;* Discharged *August 7, 1915,* "*Measles. Recovered.*"
Cause of admission, *observation on account of fever.*
Bathed { Tub / Sponge } *x* ; Valuables taken up in ward, *none except small metal cross with yellow metal chain attached.*
Witnesses: *Hanna Murphy (ward maid), Katherine Foran (nurse).*
[The foregoing is to be filled in by the nurse.]

Condition on admission, *Does not appear very sick. Looks like a case of beginning measles without complication. A few scattered rales over both lungs, front and back. Heart, abdomen, extremities, lymphatic and nervous systems all appear normal. Coughs some.*
J. G. Wilson, Surgeon.
Preliminary medication, *15 c. c. castor oil.*

ADDITIONAL DATA FOR CONTAGIOUS DISEASE HOSPITAL

Location of relatives, *Mother and sister in the Excluded Room in the main building.*
Temperature, *38.2;* Pulse, *119;* Respiration, *29.*
Scalp, *pediculi;* Eyes, *congested;* Nose, *slight coryza.*
Mouth, *Koplik spots;* Throat, *fauces red;* Ears, *negative.*
Skin, *No rash nor desquamation.*
[The foregoing is to be filled in by the doctor.]

Culture, *nose and throat and vaginal smear all taken;* No. Units antitoxin given by Dr., none.
Admitted to ward *B-1* by Dr. *Wilson. Date, July 23, 1915.*
Transferred to ward *B-2* by Dr. *Wilson.* Date, *August 1, 1915.*
Transferred to ward.....by Dr..... Date.....
Transferred to ward.....by Dr..... Date.....
Discharged from ward *B-2* by Dr. *Wilson.* Date, *August 7, 1915*
[The foregoing is to be filled in by the nurse.]

It will be noted that there are but few blank spaces to fill and that very little room is provided for recording results of examination. This is done purposely. It has been found desirable to have the *positive findings* stand out clearly in the record of the first examination. In order to accomplish this result, these findings should not be mixed with other matter which, however interesting and scientific it may be, has no bearing on the management of the case in hospital.

In those instances in which the physical findings warrant a longer record, a sheet of paper identical with that on which the nurses' notes are kept is used in addition to the admission sheet. The physician in charge of the case makes clinical notes as occasion warrants (usually not less than twice a week and sometimes twice daily), which show the condition of the patient and the progress of his disease. These notes are made on the same sheets that are used by the nurses for their daily and nightly records, and are dated and signed and placed in chronological order. The reports from the laboratory are also signed and arranged chronologically, so that one desiring to look up the medical history of a patient will find every note made by everyone who has had anything to do with the case, in exact chronological order from the time of admission to the date of discharge.

On the lower part of the admission sheet is a space for summarizing the record of the child's progress through the different wards of the hospital. This summary, together with the clinical notes and the nurses' bedside notes, both of which must invariably be signed by the person making them, serves to fix responsibility where it belongs, and thus acts as a direct stimulus to that precision of method which is essential to the proper hospital management of contagious diseases.

French Military Hospital Ships

Dr. Oudard, staff surgeon of the French navy, writes in a recent number of the *Archives de medecine navale* that the French have long employed hospital ships in their colonial wars, and that, indeed, in 1877 they built the Annamite as a hospital ship. She turned out so well that five others followed her, giving in his experience greater satisfaction than can be obtained from any converted merchantman. He wishes to see a fleet of steady ships built, about 10,000 tons and 15 knots, leased in peace time to commercial companies as passenger steamers, available at once on the outbreak of war, and each carrying 600 bed cases in single-tier cots. This is done in Japan. The French hospital ships were a great help to the army at the beginning of the war, when the battles of the Yser were being fought, and the wounded were many. The ship would lie in a northern channel port and at first she took the wounded as they were brought down by trains or ambulances, straight off the field. When the ship was as full as she could hold, about twice her calculated capacity, she would put to sea, and in a few hours discharge her patients somewhere in the west, every exertion having been made on board for the wounded, though little, except what was urgently necessary, could be achieved. Still, the wounded were greatly better off on shipboard, the pitching and rolling of the ship being far better borne, particularly by fracture cases, than the constant jolting of a train. Later on, as additional hospital ships came into service, they were less hurried, and could lie at bases, doing the duty of comfortable base hospitals, in France, at Mudros, and elsewhere. Popular report in the army credits the French hospital ships with a great deal of good work. The question of personnel is important. Dr. Oudard requires 10 orderlies for every 100 patients. In the hospital ships or barges used by the Austrians on the Danube and Save, and only employed over short distances, there were 12 orderlies for every 100 "lying" cases and four for every 100 "sitters."

The Baptist churches of Louisville, Ky., launched a campaign in October to raise $35,000 as the initial contribution to a fund which the churches of this denomination throughout Kentucky will endeavor to secure for the establishment in Louisville of a large general hospital. A total of $250,000 will be sought by the state association.

One hundred thousand dollars have been raised to establish a Deaconess Hospital at Billings, Mont., and arrangements are being made to begin the construction of a modern fireproof building in the near future.

A CONTROLLING BASIS FOR THE ECONOMICAL USE OF SUPPLIES*

Lack of Information in Regard to Quantitative Use of Supplies in Institutions—Method of Checking Waste by Charting Amounts of Supplies

By H. J. MOSS, M. D., Superintendent of the Hebrew Hospital, Baltimore

THE extraordinary conditions incident to the terrible struggle of the past three years have brought about very serious economic problems. And we in this country are awakening to the realization that we have been too extravagant in our mode of living, that we have been wasteful, and that the successful outcome of the great war will largely depend upon our ability to conserve our resources.

When the United States Government finds it necessary to appoint a food dictator for the conservation of foods and supplies, and the Committee on National Defense, through its special committee of the most prominent and distinguished men in the medical profession, sees fit to bring about a standardization of the various instruments and appliances to be used by hospitals, and with the steady increase in the cost of commodities, ranging from 50 percent and in many instances to 150 percent and even higher, it is not at all surprising that the hospitals of this country have been much alarmed over this situation, and every administrator's attention has been centered on the most serious question of how these extraordinary advances in the cost of the management of the institutions can be met.

Several remedies have been suggested and tried. They are:

1. Increasing the cost of the private rooms, semiprivate wards, and ward beds.

2. The purchasing of cheaper grades of foods and supplies.

3. Economization of the materials used without reducing the quality.

The first-mentioned scheme has probably been adopted by almost every hospital, and the patients are now obliged to pay more for their maintenance. I wish to offer my protest, however, to an increase in the ward rates. It must be remembered that, after all, the object of a charitable institution is to give medical aid to the needy. The poor, suffering as they are from the inflated prices for the very necessities of life, are in no position to meet these added burdens, particularly when they are incapacitated by illness. I object to the second, namely, to the substitution of cheaper grades, for the reason that it is conducive to destruction rather than to the building up and improvement of the reputation and standing of a hospital.

*Read before the American Hospital Association, at its nineteenth annual session, Cleveland, O., September 12, 1917.

The best manner to meet this exigency is, in my judgment, to continue as we have in normal times, but to be alert and take every advantage in the drawing of timely contracts and making proper purchases, and principally to exercise a proper control in the consumption and distribution of foods and supplies. It is upon this latter phase that I shall dwell briefly in this paper.

How many busy superintendents of large hospitals know exactly the daily quantitative use of supplies? How many know or are in a position to know how many pounds of bread, how many dozen of eggs, quarts of milk, pounds of coffee, pounds of meat, etc., are used in their institution daily? Yet such knowledge is all-important and essential in determining whether or not the individuals entrusted with the preparation and the distribution of foods have exercised economical and judicious supervision.

The question of waste has always been a much-discussed subject, but, in perusing the literature, I have failed to find any definite comprehensive system or scheme for its prevention. We are told that the superintendent must ever preach "economy" to his subordinates. How unscientific! At an address recently made by Miss Alice Hill Chittenden, president of the New York State Association Opposed to Woman Suffrage, she charged the hired household servant of today with being a marvel of incompetence, wastefulness, and indifference, and absolutely unamenable to discipline. I believe that every hospital superintendent's experience with domestics during the past year will lead him to coincide with the views of Miss Chittenden. How, then, are we to regulate and control this inefficiency?

It has been and is now the custom of every hospital superintendent or committee of the directorate or trustee to study the monthly expenditures and analyze the several items; comparing the costs with those of the corresponding months of previous years, or with the previous months of the same year, with a view of determining whether or not the price of the articles in dollars and cents was increased or reduced for the month under consideration, thereby judging the efficiency of the persons in charge of the several departments. But during the past year this study has been absolutely valueless. The steady increase and fluctuations of prices has so varied that, although the expenditures for a certain item may

show an increase at the end of a month, it does not necessarily follow that a larger quantity was consumed.

And so at the end of August, 1916, we began to total and summarize the quantities of the several foods used, and when we compared them with the following month (as is demonstrated in Tables 1 and 2) we immediately realized that the simple

TABLE I. COMPARISON OF EXPENSES IN STEWARD'S DEPARTMENT, AUGUST, 1916, AND SEPTEMBER, 1916.

	August, 1916	September, 1916	August, 1916	September, 1916
Meats	$672.36	$705.18	Beef 2,866 pounds Lamb 679 pounds Veal 470 pounds	2,899 pounds 675 pounds 696 pounds
Milk and cream	409.32	422.99	Milk 1,490 gallons Cream 22 gallons	1,480 gallons 28 gallons
Fish	57.55	75.45	845 pounds	885 pounds
Coffee and sugar	246.33	255.09	Coffee 466 pounds Sugar 1,713 pounds	528 pounds 2,047 pounds
Fowl	221.59	255.48	885 pounds	1,007 pounds
Bread	149.19	170.55	1,905 loaves	2,230 loaves
Butter	185.00	206.48	580 pounds	605 pounds
Eggs	429.05	581.05	1,475 dozen	1,642 dozen
Oranges and lemons	186.70	114.25		
Patients' days, August				4,036
Patients' days, September				4,044

TABLE II. COMPARISON OF EXPENSES IN STEWARD'S DEPARTMENT, SEPTEMBER, 1916, AND OCTOBER, 1916.

	September, 1916	October, 1916	September, 1916	October, 1916
Meats	$705.18	$592.00	Beef 2,899 pounds Lamb 675 pounds Veal 696 pounds	2,360 pounds 648 pounds 625 pounds
Milk and cream	422.99	400.75	Milk 1,480 gallons Cream 28 gallons	1,420 gallons 50 gallons
Fish	75.45	65.20	885 pounds	755 pounds
Coffee and sugar	255.09	225.67	Coffee 528 pounds Sugar 2,047 pounds	366 pounds 1,580 pounds
Fowl	255.48	219.49	1,007 pounds	880 pounds
Bread	170.55	174.69	2,230 loaves	2,190 loaves
Butter	206.48	207.39	605 pounds	565 pounds
Eggs	581.05	574.50	1,642 dozen	1,530 dozen
Oranges and lemons	114.25	58.75		
Patients' days, September				4,044
Patients' days, October				3,915

preaching of "economy" is not sufficient. We discovered that, although we had practically the same number of patients' days in September as in August, with one day less to feed employees and nurses, nevertheless we used in September 255 pounds more of meat, 40 pounds more of fish, 62 pounds more of coffee, 334 pounds or one barrel more of sugar, 122 pounds more of poultry, 325 loaves more of bread, 25 pounds more of butter, and 167 dozens more of eggs. This information was a revelation, which inquiry and investigation could not explain. It was too late. There was no way of tracing the cause. And how can anyone be expected to remember what might have occurred during a period of thirty days? Of two things we were certain, namely: (1) that we were wasteful and unbusinesslike; and (2) that we had no system or means of controlling the situation unless we could have a daily check on what we were doing. Thus, we devised the chart system as

TABLE III. DAILY RECORD OF SUPPLIES USED.

Bread.

Wards	Old people	Help	Diet kitchen	Doctors	Nurses	Women	Cook	Night
6	2	3	3	3	4	2		8
6	2	2	3	3	4	2		
6	2	2	3	1½	4	1		
		3	3					
Total								78½ loaves

Butter.

Wards	Old people	Help	Cook	Night
1	½	½		½
1	½	1		
Total				5 pounds

Coffee.

First grade	Second grade
2	4
2	2
1	
1	
Total	12 pounds

Eggs.

Wards	Old people	Help	Diet kitchen	Doctors	Nurses	Women	Cook	Night
17½	3	7	8	2		1	3	1½
3			3					
			3					
Total								52 dozen

Meat.			Chicken and Fish		Vegetables.
Beef	Lamb	Veal	Chicken	Fish	Potatoes
47	35	24	10	25	1
14					1
					½
Total	120 pounds		Total 10lbs.	Total 25lbs.	Total 2½ bushels

Milk.

Wards	Old people	Help	Diet kitchen	Doctors	Nurses	Women	Cook	Night
18	4	3	8	4½	10	2	4	3
5	3	2	4				18	
4	3		4					
40	4		6					
20			8					
			8					
Total								185½ quarts, 46 gallons

is explained in Figs. 1, 2, 3, and 4, with the patients as an indicator. The several heads of the departments are required to keep a daily record of supplies used (indicated in Table 3). This record is presented every morning to the superintendent and the items are charted and comparisons made. The superintendent is then in a position to judge whether or not the consumption was

justifiable according to a budgetary per capita allowance. If not, the head of that particular department is called to explain, and we do not have to wait until the end of the month for the information. If the chart of the previous day shows an increase in the number of patients, we justify a reasonable and proportionate increase in the quantities used; if, on the other hand, there is a decline in the number of patients, we expect a reduction.

Thus we commenced this charting system on October 1, with the result shown in Table 2. Having the same number of patients' days in October as in September and an additional day to feed nurses and employees, we consumed nevertheless 637 pounds less of meat, 60 gallons less of milk, 130 pounds less of fish, 162 pounds less of coffee, 467 pounds less of sugar, 127 pounds less of poultry, 40 loaves less of bread, 40 pounds less of butter, and 112 dozens less of eggs.

There was, therefore, no doubt of the value of our scheme. We chart not only all foods, but also soap, soda, and starch used in our laundry. We began to weigh the coal thrown into the furnace, so that we know exactly whether the coal-passer is firing judiciously. We chart also the amount of ice pulled daily. The outside temperature is used as an indicator more or less. In judging the coal, we, however, take several other factors into consideration, such as the daily number of operations, the amount of linens to be washed in the laundry, etc.

We keep a chart of the telephone calls made daily, and, when there is an unusual increase, we check up the record kept by the operator and try to locate the abuses. This has already cut down our telephone bills. The system lends itself to a study of almost any article or item in which we may be interested. Since the preparation of this paper we have added to the list a study of gauzes, cotton, adhesive, catgut, and gloves.

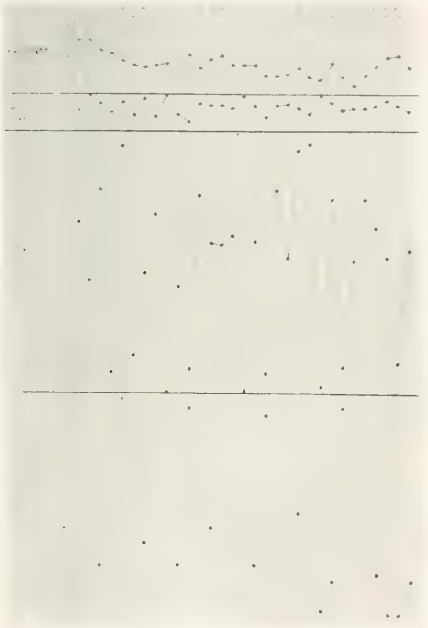


Fig. 1. Chart showing daily consumption of milk, meat, and fowl in March, 1917.

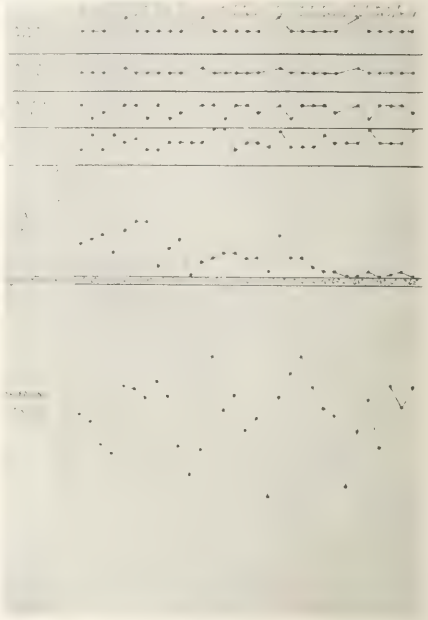


Fig. 2. Chart showing consumption of laundry soap, laundry soda, starch, ice, and coal, and number of telephone calls in March, 1917.

The direct results have been advantageous in the following ways:

1. The moral effect has been universally noteworthy throughout the hospital. All employees know that the head of the institution has a daily knowledge of their efficiency or inefficiency.

2. The heads of the departments themselves have a scientific understanding of what they are doing, and can make daily comparisons.

3. The system has stimulated a lively interest in everyone to try and reduce quantities, and at the same time provide the absolute needs.

4. The committee of directors ardently and

eagerly study these charts, carefully asking explanations for seeming rises in the curves, and it affords the superintendent an opportunity to explain authoritatively why the institution has

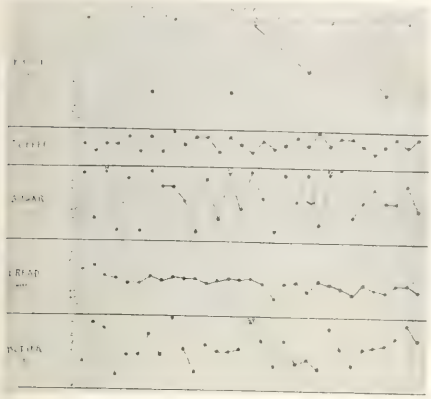


Fig. 3. Chart showing consumption of fish, coffee, sugar, bread, and butter in March, 1917.

spent more or less for a certain article in a given month.

5. The charts are used for inventory-taking monthly. The amount on hand at the beginning of a month, plus the amounts in weight or meas-

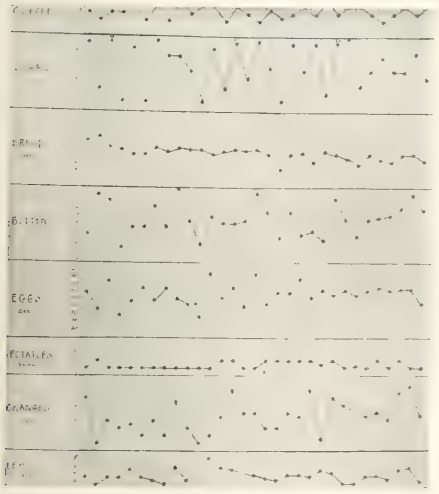


Fig. 4. Chart showing consumption of coffee, sugar, bread, butter, meat, potatoes, oranges, and lemons in March, 1917.

ure purchased, less the totals of the charts, will show the balance at the end of the month. And we have experienced little difficulty in making these inventories tally. They are usually correct, with now and then a slight variation.

To summarize: During these extraordinary and trying times it behooves us to conserve all of our resources. We are almost unanimously of the opinion that even in the best of well-regulated institutions there is a certain amount of waste. We are therefore naturally concerned in its elimination. The system I have to present may have fallacies which should be overcome and corrected, but from the results obtained, we believe we are working upon a proper principle. If it may help some other worker even in a slight measure, I feel that the short time taken in the presentation of the subject will not have been spent in vain.

TUBERCULOSIS HOSPITALS IN PARIS

Needs of Municipal Tuberculosis Pavilions—American Red Cross to Visit and Befriend Patients

The following cable from Major Grayson M. P. Murphy, head of the Red Cross Commission to France, has been received by the Red Cross War Council:

"Systematic visitation of municipal tuberculosis hospitals in Paris has just been begun by the American Red Cross. On the first visit inquiries were made of the patients as to what they most needed. On the second occasion the visitors did not go empty-handed; they took with them games, stationery, postage, jelly, colored crayons, sketch books, etc.

"During the past year the city of Paris has established temporary tuberculosis pavilions on the grounds of six general hospitals; the total capacity of these pavilions is 464 beds. Notwithstanding the enormous number of tuberculosis patients in Paris among the refugees and persons invalided from the army, these pavilions are not more than half full. Many factors contribute to this result. The large amount of work thrust upon the civil authorities by the war conditions has not permitted much to make the pavilions attractive.

"The American Red Cross has secured permission to visit these hospitals and to befriend the tuberculosis patients. It hopes that not only will the lives of these patients be made much more comfortable, and their families relieved of anxiety, but that making the surroundings more cheerful, providing additional food, games, better equipment, reclining chairs, and some form of recreation and entertainment, will result in the patients staying for longer periods.

"The use of the pavilions to their capacity would obviate the necessity of erecting additional tuberculosis hospitals with 300 beds, which would involve great expense and long delay."

The Ward liner Havana, recently secured by the Navy Department for use as a hospital ship, is considered easily adapted to that service, and the work of conversion already is under way. While the accommodations to be available depend to some extent upon the alterations, it is believed that it will be possible to provide some 300 beds. This hospital ship and another one to be obtained undoubtedly will be assigned to the Atlantic Fleet.

The Sisters of St. Francis, who conduct St. Elizabeth's Hospital at Utica, N. Y., opened a new $200,000 building for that institution October 4.

THE HOSPITAL PROBLEM OF TODAY—WHAT IS IT?*

ount of Money Invested in Hospital Property—Amount Expended Annually for Maintenance—Number and Character of the Hospitals—What They Are Actually Doing for the Sick—Responsibility of the Medical Profession

By JOHN A. HORNSBY, M. D., Chicago

THERE are in the United States 8,667 institutions for the care of the sick, having a total of 875,877 beds. These are general and special acute disease hospitals; they include hospital beds in homes for the aged, for orphans, for the incurable, and hospital beds in penal institutions. Of this total number of hospital beds at least 600,000 are occupied every day in the year.

The proportion of hospital beds to the whole population varies widely for different parts of the country. For instance, in New York city there is one bed to every 130 of the population; in Ohio, taking the state as a whole, there is one hospital bed to each 250 of the population, while in the state of Texas the proportion is as one to 450. The explanation of this is almost obvious. New York city is a great center of tenement houses, with many poor and dependent; Ohio is a state of many cities and towns, but with also a large rural population that is measurably independent of institutional care; while Texas is not only a state of widely spread population, but is made up of people of pioneer character and experience, of less poverty, who are independent and capable of self-care and mutual helpfulness.

Figuring a total architectural and equipment cost at the rate of $1,500 per bed, which is under rather than over the actual figures, we have a total amount of money invested in hospital buildings and equipment in this country of $1,313,815,500. It is fair to assume land values for hospital property at 10 percent of the cost of buildings, making a total investment in land and buildings of $1,445,197,500.

The per capita cost for the maintenance of a patient in the hospital of this country ranges all the way from $1.25 up to $7.00. By far the larger number of beds are those in public or charity hospitals, and the per capita cost in these is lower than in any other hospitals. Hence, it is fair to assume that an average per capita cost per day of $1.50, making a total expenditure for the country for each day in the year amounting to $1,313,815.50, or a total annual expenditure for maintenance alone aggregating $479,542,657.50. Approximately 250,000 beds, however, are not occupied each day; the overhead cost of administration is the same whether the hospital be full or not, but the items of raw food, dressings, and other hospital materials average approximately 50 cents per person, or for the beds unoccupied for each day, $125,000, or a total of $45,625,000, which must be deducted from the total cost of maintenance, leaving a net total for annual expenditures for hospital maintenance amounting to $433,917,657.50. It is believed that hospital architectural expansion, new buildings, and new wings amount to at least 10 percent of the amount invested, or a total of $144,519,705, making an annual cost to this country for hospital purposes, including maintenance and new construction, of a grand total for annual expenditures amounting to $578,437,362.50.

These stupendous figures give a pretty definite if incomplete idea of what we call the hospital problem; not included in these figures are public health work of all kinds, dispensaries and outpatient service, social service, bills for medical and other professional fees.

Before we go into a discussion of hospital service to the sick, in an attempt to see just what we are doing, let us now consider for just a moment what the future holds in prospect as the additional hospital problem: Within the past three years two sickness surveys have been made—one under the auspices of the Thomas Thompson Trust, of Boston, and the other in Birmingham, England, one of the most completely hospitalized cities in the United Kingdom. The American survey took in four counties in the state of New York, in which urban, suburban, and rural population averaged that of the country as a whole. All the analyses were carefully and completely made, and at the end it was discovered that about 11 percent of the people who were sick enough to be under a doctor's care were attended in the hospitals of the area and about 89 percent were attended at their own homes. In the Birmingham survey it was discovered that 12 percent of the population were sick in the hospitals and 88 percent were sick in their homes.

In the light of pathological, bacteriological, and the x-ray aids to diagnosis and advances in all branches of science that have been made in recent years, complete reliance on bedside diagnosis is no longer the rule, and in perhaps more than 75 percent of all cases that reach the hospital, laboratory work of some sort is required as an aid to correct

*Paper read before the American [illegible] at its meeting devoted to hospital standardization, Chicago, October 19, 1917.

diagnosis; in perhaps 50 percent of all the cases that reach the hospital, treatment includes vaccines and serums, or the x-ray, or scientific special feeding. These aids to diagnosis and treatment are assembled only in the hospital; they are not available in the home of the patient.

If this statement of the case is true, then approximately 90 percent of the people in such an enlightened country as this and in England are deprived of the best service during sickness that modern medical science has to offer.

Nearly every hospital epoch since hospital history began has been coincident with a war. We are now in the midst of the greatest war that the world has ever known. Hospital progress in the past decade has been more rapid than ever before; then is it too much to predict that just now we are at the threshold of a new hospital era, one that contemplates an almost if not quite complete hospitalization of the sick? If this is true, then the next few years are to witness a marvelous growth in the number of people to seek the hospital when they are sick, and hardly without question the next decade must see an increase in the number of hospital beds in this country, at least four or five times the number we have now. A sudden increase in the demand, up to the maximum which we may expect, is not possible, because there must be an educational period among the public to create a realization of what the modern hospital actually is and the necessity for its use if the sick are to have all the benefits of modern medical discoveries and methods.

So much for the present hospital problem and so much in the way of prophecy for the future. But it is a fundamental principle in any modern business that success will depend in large measure not only on a realization of the assets in the business, but also on the value and extent of the product turned out—in other words, the work that is done. The product of the hospital is health. It is not computable, except indirectly, in dollars and cents, although health is a money asset, demonstrable in that healthiest communities are prosperous and unhealthy communities are poverty-stricken, lack initiative and enterprise, and eventually retrograde rather than progress. Indeed, we now have health insurance, which comes very near to fixing a real money value on the health versus the sickness of the individual.

We have already seen that the value of our hospital plant is over one billion four hundred million dollars, and that nearly five hundred million dollars are expended annually on the maintenance of the plant, an amount that at 5 percent interest would entail an invested or earning capital of ten billion dollars. We must now proceed to determine the work that is actually being done. Fortunately, the more important phases of the modern hospital problem, under Dr. Bowman's wise arrangement, are left to abler essayists, our discussion being divided into three parts, viz., (1) the hospital problem as it is and the work the modern hospital is doing for the sick; (2) what medical science demands of the hospital that it is not now doing; and (3) how these results are to be achieved.

SCIENTIFIC WORK IN THE MODERN HOSPITAL, AS IT IS CONSTITUTED TODAY

A few of the leaders in the hospital world have realized for a long time that definite, tangible progress could come in that field only when there were data at hand, and the necessary machinery that would furnish comparisons as between individual institutions. The difficulty has been to reach a common starting point. We have some pretty definite figures, as we have seen at the outset of this discussion, concerning the character and value of our plant, but we are not very much concerned with that item in considering hospital progress, excepting in so far as the character of the plant lends itself to the output of work. We are very deeply concerned, however, with methods by which may be computed the work itself. There is no good reason why the hospital business should not be considered alongside all other industries in the modern world, and it seems to us that the hospital field is the only industrial field that has no bases of comparison that are of reliable value.

COST OF ADMINISTRATION

For instance, there is no accepted formula by which the cost of hospital maintenance can be ascertained. Some institutions figure interest on the value of their plant and money expended for new architecture and elaborate alterations, while other hospitals figure in the per-capita cost of administration only the actual outlay for monthly maintenance, ignoring the items of interest on investments, insurance, taxes, expenditures for the training school, and funds expended for alterations. In the one case we will have an extremely high per-capita cost of maintenance, and in the other a figure so low as to be entirely unjustified by the actual facts.

Then, again, one hospital is merely a boarding house for the sick, without scientific departments of any kind, and without trained people, while another hospital gives a real scientific service to the sick and has in its equipment all the accessories to diagnosis and treatment, and the benefits of trained direction over these scientific departments. And yet the state of the education of the

public is so embryonic that trustees and the supporting public, and even medical staff members, often fail to differentiate between these two institutions, and in their own minds settle the matter as to the better of the two on the cold figures in terms of dollars and cents. This is one serious reason, if not the most important, why hospital progress is so retarded.

SCIENTIFIC SERVICE IN PRESENT-DAY HOSPITALS

Abler men on this program will tell us what modern medicine has a right to expect in the way of scientific service; it is our part to try to evaluate, if we can, the service that is today available in the many classes of hospitals to which the sick have access.

At the outset, let us suggest that no thumb rule can be established for all classes of hospitals, under one heading. For instance, we have not a right to expect the same elaborateness in service in a small, unpretentious hospital in a community not overrich, whose ideals are not high and even whose medical men lack the training and skill and experience of those in larger and broader communities that afford competent material and the essentials to training from which medical men acquire experience and skill. The men in small, isolated communities demand far less—indeed, would not know how to employ—elaborate and technical machinery, whether it be in architecture and equipment or in methods. But we have often said, and repeat now, that no hospital can be better than its medical staff, and no medical staff has a right to expect evaluation of its abilities higher than the prima facie evidence at hand in the equipment and methods of the workshop in which their work is done. All of us know institutions, elaborate in architecture, great in size and rich in endowment, that are mere boarding houses for the sick, and it will be found in these institutions that the medical staff is mediocre, without ambition, energy, or enterprise. We all likewise know small, isolated institutions, far out in the country, small in size, poor in worldly goods and almost without equipment, or funds with which equipment may be bought, whose service to the sick is of a high scientific order and in which the sick man, woman, or child may have at his need the best that modern medicine offers. This is the hospital whose medical men go away for study and bring back home with them methods of practice, of diagnosis, of treatment that place their institution far up in the van of the time. So that we may be pardoned for insisting that as the medical staff of a hospital is, so that hospital will be, and we challenge the medical profession in this country and hold its members responsible for forwardness or backwardness in the character of the institution in which they severally work. This does not mean that the medical staff member must assume or obligate himself to assume any of the functions of the administrator. It is, to our way of thinking, the duty and the privilege of the physician to demand what he needs for the care, cure, and comfort of his patients, and it is the duty of the administrator to furnish what is needed. It has been said that hospital administration costs the money and that the large, rich institution can do things that the small and poor institution cannot do. This is true, but only to a limited extent. The architecture and equipment of a hospital are important items; the work that is done in the institution is the vital thing.

RECORD-KEEPING

The patient in the hospital starts with his record, or the reverse is true; the record starts with the admission of the patient. If good records are kept it is almost certain that good work will be done. In perhaps 75 percent of the hospitals in this country, large and small, general and special, the record as it is kept today is practically valueless. It is necessary to statistics to record the patient's name, his address, his social state, the name of his responsible friend, and the location to which he is assigned in the institution. In 75 percent of the hospitals there is no examination whatever on the admission of the patient, and his assignment to a location in the institution is based upon his own statement as to what he is suffering from. No admitting diagnosis is recorded, and in a vast majority of cases no history of the patient's disease is written. This haphazard method of admitting patients is responsible for very many hospital epidemics of communicable disease. A child whose mother says he has a bad cold is placed in a ward with twenty other children. Three days later he has unmistakably scarlet fever and the whole ward is infected.

But the failure to make a record and admitting diagnosis is only the beginning of carelessness and inefficiency. In 75 percent of the hospitals the records do not show a diagnosis after examination, and even up to the moment that the patient goes to the operating room for surgical procedure; in many hospitals this lack is premeditated and is actually intended to cover up and hide carelessness or incapacity on the part of the surgeon to diagnose the disease for which he is about to subject his patient to a serious major surgical operation. That is to say, in 75 percent of the hospitals of this country the scientific auxiliaries to diagnosis are not employed, and medical treatment and surgical interference are undertaken after the

most cursory bedside examination. That was the necessary practice of fifty years ago because there were no scientific adjuncts, the laboratory and the x-ray, to diagnosis. No intelligent community will tolerate it today after being enlightened, and yet it is the practice.

We find that the only part of the medical record of patients in a vast majority of the hospitals of this country is the nursing chart, and that merely records the temperature, pulse, respiration, and medication. It is rare indeed that we find a running, continuous medical story of the progress of the case written from day to day in the record.

There are spasmodic attempts in these 75 percent of the hospitals to make and record urinalyses in special cases, and we find the occasional record of other laboratory examinations, but it is not routine practice. Who is responsible for this? I submit this question to you gentlemen of the medical profession.

In perhaps 25 percent of the hospitals there is a serious attempt to keep a good medical record, and in about 10 percent of all the hospitals the attempt is painstaking and constantly employed and in keeping with the demands of modern medicine. In these hospitals, whether the patient be a service case and a free patient, or a private patient sent in by his physician, there is an examination as a part of the admission routine and an adequate diagnosis recorded. It is the routine practice in these hospitals to begin, through the service intern, scientific work on the patient the moment he is in bed. First a history of the case is taken and recorded by the intern, and this history brings to light, even in the mind of an inexperienced intern, the probable diagnosis. Then the serious work is begun. A urinalysis, single or a twenty-four-hour specimen, is started. A blood count is made and blood pressure taken if there are indications that this is a factor in the case. A sample of the blood is taken for complete examination; a test meal is given for chemical examination of the stomach contents, and, if the story has pointed to the probable importance of the state of the intestinal tract, a sample of the stool is taken for microscopic and perhaps chemical examination. If the story points to the likelihood that the x-ray, either in fluoroscope or plate, may be of value, that work is done. Meanwhile the patient is put to bed and fed sparingly.

Presently the visiting medical man, the patient's physician, sees him, and there are presented to him on the chart data that in 90 percent of the cases will give him his diagnosis.

Some two or three years ago a survey was made of the autopsy records in Bellevue Hospital, New York, and the statement was published, as a result, that in 50 percent of the cases that went to autopsy the diagnosis was wrong. These figures were so startling that we took the liberty of making some inquiry concerning the method employed to obtain them, because if less than one-half of the cases that went to autopsy in an institution like Bellevue Hospital, with the splendidly equipped medical men in practice there, were correctly diagnosed, what was to be assumed as the state of things in less fortunate institutions?

We found that these figures were taken from approximately 300 selected cases, that very many patients arrived at the hospital comatose and moribund, and that some of them died almost immediately upon arriving there. So that we may be forgiven for challenging any set of figures built in this way and for saying a word of defense for the American medical profession, whose ability, we believe, is not represented in any such state of affairs, and we believe we are safe in saying that in the seriously minded hospitals of this country, whose medical men are of average ability and who are enterprising and industrious, diagnosis is humanly possible with the help of present-day mechanical agencies in a very large percentage of cases, and we believe that diagnosis at the end of the knife is unnecessary except in a comparatively small number of cases.

Let us not be understood as insisting that a hospital, in order to be accorded the right to exist and to care for the sick of its community, must perform the intricate and higher technical things in diagnosis. We believe that a small community, whose hospital must make an unpretentious beginning, will be excused and justified if it does merely the best its facilities and equipment and the skill of its medical men will allow. But in such a hospital the unforgivable thing, to our way of thinking, is dishonesty in the work it does. This is not an indictment of the physician; it is a warning that medical men are being made the victims of this species of dishonesty, and that they and their patients are the sufferers. The medical men in such a hospital will be abundantly justified if they must rely on bedside diagnosis only — the eye, the ear, and the touch—but the hospital itself will never be justified in assuming to perform service that it is incapable of doing accurately and with assurance to its medical men that the service performed is honest. There are many methods that may be employed by these small hospitals for doing much of the work that they are not now doing. The joint employment of trained directors for part-time service can, in a vast majority of cases, be substituted for all-time salaried, trained people, and it will be far better for such a hospital

to employ for its laboratory work a properly trained man, who can give it only one day in the week, or one hour in the day, whereas the hospital will never be justified in offering to its medical men the services of an incapable and inexperienced pathologist, even when such person might be available for all of his time.

It will nearly always be possible for these small hospitals to have a competent pathologist for half a day in each week, even though he may live fifty miles away at some other larger center, and a great majority of hospital patients can better afford to wait for such accurate examination and diagnosis than to have a less competent pathologist guess on their cases.

And so with the x-ray work of the institution. Almost any hospital employee, an intern, the pharmacist, the head of the training school, even an intelligent pupil nurse, may be taught, in a short time, to take pictures of the long bones in cases of fracture and pictures of metallic foreign bodies. Most other cases will wait until the consulting radiologist is due to spend a day or half a day in the institution, but the hospital will never be justified in substituting for a trained operator and a trained interpreter someone whose pictures are badly done and who is utterly incapable of interpretation. And yet that is exactly what many hospitals in this country are doing today—using inefficient, untrained x-ray operators who are utterly incapable of interpreting the plates they take or the fluoroscopic picture they may see. Even the best surgeons in this country, men who are internationally known as diagnosticians and operators and who have had large experience in the observation of results of x-ray work, decline to interpret for themselves and rely for interpretation upon the trained and capable roentgenologist.

MODERN DIETETICS

Less than a month ago, I visited a large modern hospital in an important central western city, a hospital of 400 beds employing high-salaried administrator and associates. I found installed there as dietitian a trained woman who was being paid a large salary, as such salaries go. She had been there for a year; she had come from the position as dietitian in one of the foremost hospitals in this country, whose medical men are known round the world for their ability and progressiveness in internal medicine. This woman had been thoroughly trained to support the physicians and to feed their patients, specially in diseases of metabolism. In other words, she was thoroughly equipped for the work for which she had been employed. I asked her what she was doing. She said she was making up the trays for the private patients.

"Yes, but I mean what scientific work are you doing with your doctors?" I asked her.

"Nothing," she replied.

"Why?"

"Doctor, I have been here a year," she replied with suppressed feeling that I had not expected, "and I have not been asked by a single physician in the hospital to feed a patient specially, nor have the doctors, any one of them, taken the slightest interest in anything that I might be able to do."

She added, however, that on her own initiative she was at that moment engaged in the special feeding of a diabetic patient in the free ward; but unfortunately, she said, she had no urinalysis and no blood picture, and the patient was not being weighed.

I happened to know that the superintendent was a medical man of high ideals who had brought that woman into his hospital for the purpose of giving to the patients, through their doctors, real scientific service. I had occasion, later in the day, to announce to a large contingent of the medical profession of the city that their hospital was decades ahead of them—and that was the case.

I am repeatedly in receipt of letters from dietitians throughout the country, women of high education, of elaborate special training, and of intelligence and ability, who complain that they are given no work to do in the special feeding of cases in their institutions and that their energies are confined, through no fault of their own, to "making up the trays for the private patients."

I think that perhaps twenty hospitals in this country, ranging in the number of medical men taking part in each instance from one to five doctors, are actually employing the services of a trained dietitian in a scientific way in the special feeding of selected cases. Four years ago I made the statement that there were perhaps half a dozen capable dietitians in the United States. My statement was refuted from many quarters. I now make the statement that there are twenty capable trained dietitians in the United States who have the ability and necessary training to support the scientific internist in the feeding of special cases in diseases of metabolism. I make the prediction that in two years from now there can be more than one thousand trained competent dietitians in the hospitals of this country, provided the medical staff members specializing in internal medicine utilize them and help to perfect their training.

Nearly all hospitals have the old formula of "special diets." We know, however, that most of

these special diets are valueless, and that, in the light of studies in metabolism and in the physiology of digestion, they are based upon wrong principles and exploded theories. And yet we find these special diet charts in the serving rooms of nearly all hospitals, and in most of these they are exalted into actual fetishes.

SOCIAL SERVICE AND FOLLOW-UP WORK

It has been the complaint almost throughout this country for a decade that the hospital is a place for the millionaire and for the pauper, but that 90 percent of the population, people in moderate circumstances who would refuse charity and cannot afford the luxuries of the modern hospital, have been without consideration. Those of us who have been closely in touch with modern hospital practice know that this indictment has been largely true. There seems now to be dawning a time when it will be no longer true. In the first place, it seems to me that private patients in moderate circumstances have been educated to the point that they no longer demand the luxuries of private rooms and special nursing and special menus, and that they are coming to be more and more content, as time goes on, to go into the small two-bed and four-bed wards of the hospitals and realize the value of the undergraduate pupil nursing. It seems also that this class of patients are coming to realize that the hospital is not a hotel with the special function to minister to dainty luxurious appetites for rich and costly foods, but that the plain and simple things agree best with sickness and agree best with most patients. It seems to us that these are the first steps in any serious attempt to give a greater consideration to the vast middle class of people in this country.

And we have now gone a step farther and are making some serious attempts, at least in a few communities, to care for the out-patient who would reject charity and who cannot afford the luxuries of visits to the private offices of physicians. The day clinics in New York are an example; the newly formed Scripps Foundation, of San Diego, Cal., is such a clinic. A few isolated hospitals, here and there, are attempting precisely the same thing, through well-organized groups of medical men who coordinate their efforts in special branches of medicine and who cooperate in the diagnosis and treatment of cases for a lumped fee. The trend in this direction is going even a step farther, and in a number of isolated places medical staffs of hospitals have been put on salaried, full-time service, and their special abilities and energies are being coordinated in the diagnosis and treatment of patients—for one fee. The necessity for this service is in response to a definite public demand, a demand coupled with the complaint that medicine has become highly specialized and that a patient who needed the services of several specialists in the diagnosis and treatment of the disease was unable to pay consultation fees to several men in several branches of medicine. However much we may assume that this trend is likely to interfere with the earning power of members of the profession, we may just as well make up our minds that exactly that contingency is facing the profession today. I am not undertaking a solution of that problem. I am merely warning that the problem is here, and is only another expression of that far greater and more serious problem facing the American profession, state medicine.

One of the very greatest deficiencies in our hospital records, and consequently one of the most important items of hospital and health statistics, is the almost total absence of follow-up work. I happen to know one institution, exclusively surgical in character, that spends large sums of money and employs a corps of trained people to follow up to their homes, over long periods of time, every patient operated on. Only recently it fell to my lot to look over some of these records, and I was astounded to find that eager, anxious, ambitious women, with the stimulus of an insistent demand from the surgeons, had been enabled to follow a large percentage of their cases more than two or three years. And yet we know that surgery is successful only as a permanent cure or as a definite preannounced period of relief. Many patients get well, apparently, and go back to their homes greatly relieved following a surgical operation, only to have the disease recur after a brief interval of relief. Many thousands of these cases are reported by members of the surgical profession as cures, when, as a matter of fact, a correct diagnosis had not been made even on the operating table and no relief whatever had been afforded; the only thing that had been accomplished was that the patient had been subjected to the pain, distress, and hazard of a major surgical operation that had dwarfed to the point of exclusion the original trouble from which he had suffered.

If this means anything, it means that measures must be taken by the hospitals of this country to follow patients back to their homes and to a period of complete cure—or to recurrence—before the record of the patient can be completed and reported for the purposes of the literature.

It would be far pleasanter to me to have penned and read to you a eulogy of American medicine—to have painted for your edification an apotheosis of the American profession—but the task that

was assigned to me claimed out of my somewhat varied experience a story of actual achievement. It is a plain, unvarnished tale of modest accomplishment, as I have told it. It has pictured the god of science walking with feet of clay, but if the pathway shall lead to the higher heights, into realms that now seem to invite and permit the entrance and habitation of only the superman, we shall feel abundantly rewarded for the exceedingly small part we have had in pointing the way.

OIL AS FUEL IN INSTITUTIONS*

Comparative Cost of Coal and Oil as Fuel in Hospitals—Advantage of Equipment Permitting Ready Change From One Fuel to the Other

By JOHN M. PETERS, M. D., Superintendent Rhode Island Hospital, Providence, R. I.

IN most institutions the cost of fuel used for heating, power, and light is the largest item except that of pay-roll in the current expense account. The cost in a given institution depends on many factors: the location in relation to the source of supply; the character of buildings, whether of group or isolation type, one or many stories; whether the fuel is used to generate electricity for light and power as well as for heating; whether exhaust steam from engine is utilized; the pressure of steam; the character of piping; use in laundry, kitchen; system of heating used, whether direct or indirect, etc.

Up to within a comparatively few years, coal of different kinds and grades has been the almost universal fuel. Although petroleum has been used for centuries for different purposes, it was not until 1859, when the first producing well was drilled in Pennsylvania, that its commercial possibilities became well known. In that year the total yield of petroleum was only 6,340 barrels. Since then oil has been discovered in all parts of the world, and in 1915 the production was 426,695,347 barrels, of which the United States produced 306,484,728 barrels, or 72 percent.

The countries producing the largest amounts in 1915 were: (1) United States, (2) Russia, (3) Mexico, (4) Dutch West Indies, (5) Roumania, (6) India, (7) Galicia.

Oil was not produced commercially in Mexico until 1909, but in 1916 the production was 40,000,000 barrels, and the country is said to contain the largest oil fields in the world.

The development of the production during the last few years of a large supply of petroleum of a heavy gravity and asphaltic base, in California, Texas, Louisiana, Oklahoma, and Mexico has been the cause of this unusual development in the use of oil, not only as fuel, but for use on roads, roofs, etc.

These oils contain 10 percent to 50 percent of asphalt and a smaller proportion of lighter hydrocarbons, and the residue after partial distillation represents a large part of the original crude oil which is suitable, so far as is now known, only for fuel oil, road oils, asphalts, and their by-products.

Although crude oil is used as fuel in some places, especially in the oil regions, greater precautions to safeguard in its use, because of its low flash point, must be taken.

Fuel oil is more satisfactory and safer for burning purposes than is crude oil, because by its partial distillation the light and highly inflammable products, together with the water which invariably is found with crude oil, have been removed.

Oil that is properly distilled can be used as a fuel, when storage tanks and oil-burning equipment have been properly installed, as safely as can coal.

To discard all steam-generating equipment and install other types of power units is out of the question, but a change of fuel, or rather, ability to change readily from one kind of fuel to another when advisable, is possible and deserving of serious consideration by every power-house operator. The logical and practical substitute for coal is oil, and with these two practical fuels to be obtained in many localities, it is well for the management of every power house so situated to consider the advisability of being able to change from one to the other.

Oil, as a fuel, has long passed the experimental stage, for every type of steam-generator—on rail, afloat, or stationary—has been economically, satisfactorily, and efficiently operated on oil as well as on coal. In fact, under some conditions, oil has entirely superseded coal as fuel, and the absence of standby losses daily adds to the triumph of oil. The oil supply as yet is limited, however, and cannot be counted upon at all times in all markets, the fluctuations in price of oil until recently being greater and more sudden than those of coal. As an auxiliary fuel—one that is made use of only occasionally in emergencies—it may be found convenient and economical.

*Read before the American Hospital Association at its nineteenth annual session, Cleveland, O., September 12, 1917.

In order to create a ready sale for oil, it has become necessary to develop a fuel oil market, and to do this the oil companies have built large storage stations in the principal ports of the United States where fuel oil could be brought directly from the oil fields to pipe-line terminals in large tank steamers.

It is now possible to obtain fuel oil in nearly all the large ports of the United States. This has assured the manufacturer and steamship operators of a constant supply, and in order to make the proposition still more attractive, some of the oil companies offer long-term contracts of from three to five years at a fixed price.

In order to utilize the heat value of fuel oil, it must be changed from a liquid into a spray consisting of fine particles of oil floating in and surrounded by air. In this condition it can be easily ignited, and the value of the oil as a fuel will be directly proportional to the fineness of the spray. Each particle of oil must be supplied with the necessary amount of air so that a complete union may result when the temperature is raised to the ignition point, the resulting product being carbon dioxide, water, and other oxides, if sulphur is present.

A great waste of fuel will result if the proper mixture of air and oil is not secured and constantly maintained. If too little air is admitted to the furnace, more or less heavy smoke will be produced, but if too much air is admitted, while it cannot often be detected by the eye, there will be a corresponding loss in the heating value of the fuel. It is, therefore, a matter of great importance that the exact amount of air for combustion be admitted to the furnace along with the oil spray, so that the maximum heat value in the oil may be obtained.

Installation of an auxiliary oil-burning system necessitates only a few minor alterations to the ordinary coal-burning steam plant, the addition of the necessary piping and but little mechanical apparatus. The burners themselves should be located in the furnace door, either in openings cut in the regular door to admit them, which can be closed again when coal burning is resumed, or else in extra furnace doors of firebrick for use only when burning oil. The remainder of the equipment consists of the reservoir or oil tank, which should preferably be located underground and away from the boiler room; apparatus for pumping the oil from the reservoir, for subjecting the oil to pressure before it is delivered to the burner, and means for preheating the oil, all of which operations may be performed by one piece of mechanism situated in a convenient location in the boiler room; a steam connection for vaporizing the oil; and the piping necessary for connecting up the system.

The steam connection consists simply of a pipe from the top of the boiler to the burner, with a reducing valve along the line, before it is delivered to the burner through the regulator. The regulation of oil and steam at the burner is often accomplished by simple hand valves forming part of the mechanism of the burner, but automatic regulators which control the amount of steam and oil as the load varies are more dependable. The admittance of air to the combustion chamber takes place through the firebrick covering necessary to protect the grates and exposed metal parts of the combustion chamber from direct contact with the flame from the burners and should be only rapid enough to assure proper combustion.

The first question that naturally presents itself to the power-house operator is: for the generation of steam, when is oil as economical or more economical a fuel than coal? It is upon this point that the "evident" wisdom of an auxiliary oil-burning system depends. "Evident" is emphasized, for other points pertaining to the elasticity and convenience of a plant equipped to operate on two fuels, while less obvious, are important. To analyze the "evident" points, the average total cost of developing one horsepower, including all expenses of operation, maintenance, and the burden of interest on original outlay, taxes and insurance on equipment, for a plant developing 500 horsepower, has been ascertained: (1) for a coal-burning plant; (2) for a plant burning coal, but equipped to burn either coal or oil; and (3) for such a combination plant burning oil, but equipped to burn coal.

It has been shown that, in a plant equipped to burn either coal or oil, oil at 2.6 cents per gallon is as economical a fuel as coal at $2.60 per ton, and that a coal-burning plant could deliver power at such a rate only when coal was less than $2.76 per ton.

It is true that the addition of oil-burning equipment to a coal-burning plant adds to the burden of interest, taxes, and insurance, but this increase is comparatively small—equivalent to adding 6.18 cents to the price of coal per ton—and may be taken care of by a judicious purchasing agent taking proper advantage of the usual spring cut in the price of coal when placing coal orders, and purchasing fuel oil when that commodity is procurable at an attractive figure, and by an economical operator who works with the purchasing agent in keeping the expense for fuel at a minimum, operating on oil when advisable, and vice versa.

Inasmuch, therefore, as the initial outlay neces-

sary for equipping coal-burning furnaces with auxiliary oil-burning apparatus is inconsiderable; as the average cost of one fuel amounts to about the same as the average price of the other in many localities; as there is no increase of labor required for oil burning over that required when using coal as fuel (on the contrary, a considerable saving may be made in the pay-roll); and inasmuch also as almost invariably oil may be obtained at some time during the year as readily and as advantageously as coal—there would then seem to be no reason why any plant need experience a shutdown from that state of affairs so much dreaded at the present time, namely, a shortage of coal.

Plants which would show the greatest saving by adopting fuel oil come under the following classes:

1. Plants in which the cost of coal handling is high. This may be due: (*a*) to the location of the plant in respect to tidewater or railroad delivery, or (*b*) to inadequate coal-handling machinery or to the fact that its installation would not be justified by the saving effected.

2. Plants that have a high fire room labor cost.

3. Plants which have limited boiler capacity or their capacity limited by their stack area.

4. Plants located in districts where smoke ordinances are strict.

These savings are clearly illustrated by considering the following advantages obtained by the use of fuel oil:

1. (*a*) Higher efficiency, due to more perfect combustion with less excess air, and, accordingly, less heat lost up the stack; (*b*) a more equal distribution of heat in the combustion chamber, as the fire doors do not have to be opened; (*c*) more heat absorbed due to the clean condition of the tubes.

2. No cleaning of fires is necessary, which enables the boilers to be operated at their maximum capacity continuously.

3. A reduction in the cost of handling fuel, as this is done mechanically or by gravity. No expensive conveying or elevating systems are necessary, as fuel oil is delivered by either pumping or running the oil by gravity into the fuel storage tanks. This is an economy, not only in the cost of handling fuel, but also in the first cost of the plant.

4. Reduced cost of maintenance. No firing tools or grate bars are necessary, and accordingly the furnace lining and brickwork last longer. The burning out of grate bars in a coal fire, especially when automatic stokers are used, is a constant source of expense, as is also the damage to furnace linings caused by the use of firing tools and the removal of clinkers.

5. Absence of coal dust, dirt, and ashes, which enables the boiler room to be kept clean, and accordingly reduces the wear and tear on pumps and other machinery; also the cost of handling and removing ashes is entirely eliminated.

6. Ease with which fires can be regulated from a low to a most intense heat in a short time. The use of fuel oil enables the engineer to leave his plant standing cold to within a short time before the boilers have to be cut in on the line. The burners are then lit, and in a few minutes the boilers will be at full working pressure. Fluctuation in boiler loads can be taken care of on a moment's notice by simply turning the oil and steam valves, and as soon as the demand ceases the fires can be at once turned down to normal or extinguished entirely, as the occasion demands.

7. Saving in labor of all kinds—firemen, coal passers, and ash handlers—as only one fireman is required to operate from ten to fifteen boilers. An example of this economy is well represented in a large plant in New England equipped with 15 Babcock & Wilcox boilers aggregating 5,500 horsepower, which operates three eight-hour shifts per day. When coal was burned sixty-three men were employed in the boiler room, but after the plant was converted to a fuel oil this number was reduced to seven.

8. Great increase in boiler capacity, depending on the grade of coal used and the draft conditions. Generally from 10 to 15 percent increased capacity can be obtained by using fuel oil, and, as the stack area required for burning oil is only 60 percent of that required for coal, 40 percent more power can be developed from the same stack.

9. Absence of smoke. The increased attention given to smoke laws by the various boards of health throughout the country has made the producing of smoke in a plant a serious question. In a properly handled oil-burning plant, smoke is eliminated entirely, except in a few cases when the stack will smoke for a short period while the burners are being started up from cold.

In the last fifteen years many patents have been taken out on various types of oil burners, but, disregarding the small structural differences between them, they can all be brought under three distinct classes, each of which has its own particular field. These are:

1. Steam jet, which use steam as the atomizing agent.

2. Air jet, which use compressed air.

3. Mechanical, which use neither steam nor air, but break up the oil by heat and pressure and the mechanical construction of the burner.

In order to obtain high efficiency with fuel oil, no so much depends on the type of burner selected

as on the manner in which the oil-burning equipment is installed and operated. Therefore, the work of equipping a plant for fuel oil should be left entirely to those who have had extended practical experience in the burning of oil under all types of boilers.

In nearly all fuel oil installations under stationary boilers steam is used as the atomizing agent. Experiments have shown that it takes practically the same amount of steam to operate an air compressor for supplying compressed air for atomizing as it does to atomize the oil direct with steam, and the additional investment and upkeep involved makes its use impracticable for general boiler practice.

The chief requirements for burning fuel oil efficiently are as follows:

1. The oil must be thoroughly atomized.

2. After being atomized it must be brought into intimate contact with the requisite quantity of air for its combustion, and this quantity must be at the same time a minimum to lower the losses in the stack gases.

3. Combustion must be complete before the gases come in contact with any firebrick or boiler-heating surface.

4. There must be no localization of heat in the furnace.

5. Bridge walls and target walls should never be used.

6. The furnace should be designed to give depth and volume, which are determining factors affecting furnace efficiency and capacity.

7. A fishtail flame burner is most satisfactory, as it spreads out the oil in a thin sheet and provides for the most economical use of air for combustion.

8. The oil should be heated to the correct temperature before it is atomized, this temperature varying with the particular oil used. If the oil is heated above its fire point, it will disintegrate and carbon will be formed, which will tend to clog up the burner, and if the oil is not heated sufficiently, perfect atomization will not be obtained and imperfect combustion will follow.

One of the most important questions in the combustion of fuel oil is the regulation of the air supply. In a properly designed furnace the grate bars are removed and a firebrick floor with carefully planned air openings is laid on pieces of 2-inch pipe extending across the fire box. The air supply is admitted through these openings in the furnace floor so that it will come in close contact with the atomized oil, and perfect combustion will take place before the gases come in contact with the heating surface of the boiler.

The required amount of air should be regulated by opening or closing the stack damper, and not by opening or closing the ashpit doors, which should be left open at all times. Regulating the air supply is generally done by hand, but a more satisfactory and economical way is by the use of an automatic damper regulator, which is operated by the gas pressure in the furnace. When a change in the gas pressure occurs, the regulator operates the flue damper in such a way that it counteracts the change in pressure, tending, therefore, to maintain a uniform pressure in the furnace chamber for all rates of combustion.

A perfectly clear stack indicates excess air, whereas smoke indicates a deficiency. With properly designed furnaces the best results are secured by running near the smoky point. A slight variation in the air supply will affect furnace conditions in an oil-burning boiler more than the same variations where coal is used, and therefore particular attention should be paid to this point.

Fuel oil installations should be as far as possible in duplicate. Since all the burners are connected on one main feed line, cross-connected duplicate pumps should be installed, so that the shutting down of one pump for repairs or any other cause will not necessitate the closing down of the plant.

Under favorable conditions 1 pound of oil will evaporate from 14 to 16 pounds of water from and at a temperature of 212 degrees F.; 1 pound of coal will evaporate from 7 to 10 pounds of water from and at 212; 1 pound of natural gas will evaporate from 18 to 20 pounds of water from and at 212.

From many tests made in New England mills, it has been found that 4.2 barrels of Mexican oil are equivalent in heating value to 1 long ton (2,240 pounds) of Pocahontas coal.

Although a fair idea may be obtained of the comparative cost of coal and fuel oil by making certain assumptions in regard to heat values, gain in efficiency, saving in labor, still this will not enable one to figure the exact saving which can be made by changing from one fuel to the other. The reason for this is that the saving may often depend to a large extent on other things than the cost of fuel and the saving in labor, such as increased capacity facilities for fuel storage, advantages of pumping fuel oil over methods of handling coal, saving in banking fires, elimination of smoke and dirt, all of which will generally show a saving that cannot be figured out in advance in dollars and cents, but would in many cases throw the ultimate cost decidedly in the favor of oil. The only way to determine the exact saving is to operate the plant with each fuel for a period long enough to get accurate data on all items entering into the question.

At the Rhode Island Hospital, for nearly twenty years or more, Pocahontas, a high-grade bituminous coal, was used until August, 1916, when, through the wisdom and generosity of the president of its board of trustees, an oil-burning equipment consisting of a Worthington duplex pump and a storage tank of 25,000 gallons capacity, placed under ground 40 feet from the boilers, was installed, and the simple necessary changes made in the fire box for placing the Hammel burners were made. The cost of the whole equipment and the necessary changes was about $4,500, and the installation and changes made in summer when only a small part of the plant is in use did not compel us to shut down our plant at any time.

We have used the Hammel oil burners and purchased our oil from the Mexican Petroleum Company, and the cost for fuel (at $1.15 per barrel of 42 gallons, for ten months, October, 1916, to July, 1917, inclusive) was $14,549.27 as compared to $12,963.62 for the preceding ten months, when Pocahontas coal at an average cost of $4.40 per long ton was used.

As regards the prices quoted above as paid for fuel, a contract for a five-year supply of oil was made when it was decided to use oil as fuel, and the price paid for Pocahontas was unusually low because of certain favorable purchasing conditions.

If we were using coal instead of oil this past year, the cost, of course, would be enormous. As regards other advantages, we have had no complaints from the smoke inspector; we have saved the carting of ashes, we have much cleaner boiler and engine rooms, and have had less damage to our power plant. We have much less soot and dirt in all parts of our buildings and therefore less cleaning and less wear.

We have two strings to our bow: we can change from the use of one fuel to that of another in twenty-four to forty-eight hours in case either fuel cannot be obtained or in case the price of one is prohibitive.

Our boilers were made by the Babcock & Wilcox Company and are 550 horsepower capacity. With the use of coal their capacity was strained in very cold weather, and, if additional buildings were erected, it would be necessary to increase our boiler capacity, and this, in our case, would have meant the expenditure of a large sum because of the necessity of erecting an addition to our boiler room and making some very important structural changes, which would have cost dearly.

With the use of oil we feel that we have gained at least 33$^1/_3$ percent in heating capacity, and, when a boiler which has been in use twenty years or more is replaced by a larger one of a more modern type, we can easily furnish steam enough to care for the needs of several large additions to our plant.

Most of the subject matter of this paper was taken from papers written by experts in the use of oil as fuel, and I wish to make acknowledgment especially to Frederic Wing, engineer, of the Mexican Oil Company, from whose paper, "Fuel Oil for Stationary Plants," read before the A. S. M. E. in Boston recently, I have drawn very freely; to W. F. Ross, of the Hammel Oil Burning Equipment Company, and to editorials and papers published in the magazines *Power* and *Practical Engineer*.

Military Hospital in France Controlled by Women

The medieval and the modern join hands in wonderful accord at an old abbaye within thirty miles of Paris, where the romance clinging to an ancient building of ancient architecture, once the sanctuary of peaceful devotees, is transfused into the living drama of heroic men and ministering women whose parts are written by the point of the sword.

This Abbaye de Teyaumont is now one of five hospitals financed, initiated, organized, and staffed by the Scottish Women's Hospital Fund for the allies' wounded in their own country. It is known as Hopital Auxiliaire No. 301, affiliated to the Société Francaise de Secours aux Blessés Militaires, and under the British Red Cross.

The surgeons, with Miss Ivens at their head, numbering, with the bacteriologists, seven, wear a simple uniform of gray linen, with the silver badge on velvet of the French medical service on their collars. Comely, capable women, as sincere as they are skillful at their work, they are no longer supervised in operations (as at first) by French surgeons, because it was recognized after a few days that their profession was backed by expert performance. The badly wounded men who come there feel confidence in these marvelous fingers, whose dexterous accuracy of touch is enhanced by softness, and they are soothed by the feminine voices.

These lion-hearted women are performing as many as a hundred and fifty or more operations in a week. They avoid amputations wherever possible, of course, and one man whose hand seemed hopelessly crushed, owes the restoration of three fingers to their expert method of repair.

Such work as is being carried on by British women in France and elsewhere, must surely bring England into close and sympathetic touch with her allies. The men who leave the abbaye healed of their wounds (for only 3 percent have succumbed hitherto) will not fail to remember, and to tell the women at home who are dear to them, of those other women with "the strength of silk who came across sea and land to be sisters to the brothers-in-arms of their country."—*Hospital World*, Toronto, Canada.

The Massachusetts State Guard has adopted a portable hospital unit designed by its chief surgeon, Dr. William A. Brooks. It consists of four buildings—an operating room, a ward room, a kitchen, and a staff headquarters. The buildings can be easily erected, and can be dissembled, packed, and transported in a short space of time, obviating the necessity of moving injured persons over distances to available hospitals. The unit has a complete equipment of hospital appliances, and can accommodate 125 patients.

REDUCING THE HAZARD TO LIFE IN NON-FIREPROOF HOSPITAL BUILDINGS

Extent and Character of the Danger—Impracticable and Dangerous Devices Advocated by Some—Method of Sectioning Buildings by Fire Walls

By H. F. J. PORTER,* M. E., New York.

SEVERAL holocausts having occurred in hospitals and asylums of Canada and the United States during the past winter, drawing the attention of the country generally to the necessity for increasing and improving the facilities for safeguarding the inmates of these institutions from the fire hazard, I feel that it may be of interest to describe some work which has just been completed in the hospitals and other institutional buildings of the department of public charities in the city of New York, about 200 in number, for the protection from fire of the bed patients and others equally helpless. Preliminary reference to the work was made in THE MODERN HOSPITAL in November, 1914, and January, 1915.

The commissioner of public charities had previously authorized a comprehensive report on the fire hazard to life in all the buildings of the department, and the recommendations in this report formed the basis of the improvements now made. Mr. A. L. A. Himmelwright and I submitted the original report and were engaged to prepare plans and specifications and supervise the work of construction and installation.

The buildings under the jurisdiction of the department of public charities are, with few exceptions, quite old and consist generally of the type known as "non-fireproof"—that is, with masonry walls, wood floor and roof construction, and wood interior finish. These buildings house many thousands of sick, injured, blind, feebleminded, cripples, and otherwise helpless persons of all ages from babies to the very old.

In case of fire, stairways and fire escapes, which are the ordinary exit facilities provided in such buildings, cannot be used by these people, because they are physically unable to move and help themselves, and some are in such a condition that they cannot be moved even if the nurses and attendants regularly employed were sufficient in numbers, which they are not, and, therefore, the latter would be able to save only a small percentage of the large number housed in these buildings, and the rest would inevitably perish. It is difficult to appreciate the fact that, should a fire get control in any of the thousands of hospitals all over the world except the few which are built absolutely fireproof, the physically helpless patients must be burned up. Yet such is the case.

Realizing the seriousness of the situation, the authorities had provided in the largest and most crowded buildings a type of steel chute similar to the cylindrical "down-and-outs" one sees at Coney Island and recreation resorts, into which it was proposed that some of the hospital attendants would throw those patients who were so incapacitated that they could not go down the outside fire escapes by themselves, and when they had slid down to the ground other hospital attendants were expected to carry them away and make some suitable provision for them.

These chutes had, however, been found totally impracticable for the purpose. In fact, it was realized that more people would be injured and killed by their use than could be saved from the fire and they were not put into service.

About three years ago, shortly after the "Triangle" fire, I brought to the attention of the public a system of "horizontal escape" which I had introduced into high, crowded factory buildings and which obviated the necessity of taking the people down stairs at all in case of fire. I pointed out that, as ordinarily constructed, elevators, stairways and fire escapes under emergency conditions were almost always sources of congestion, panic, and frequent loss of life, and that "vertical escape," down through the fire, in order to get away from it, was irrational.

The "horizontal escape" proposed was obtained by introducing a dividing fireproof wall across the building extending from cellar to roof, with a doorway in it on each floor protected by standard fireproof doors. In case a fire should occur on any floor on one side of the wall a properly designed fire signal would notify the people on all the floors on that side of the wall, and they would immediately pass through the doorway to the other side of the wall and close the fireproof doors after them. The barrier thus formed against the fire would make them as safe as they would be in a separate building in which there was no fire. From whatever floor they happened to be on, they could reach the ground at their convenience by elevators or stairways.

In hospital buildings this method of saving the bedridden and otherwise helpless patients involves wheeling them in their cots through the doorways to safety without disturbing them. The

*Mr. Porter has tendered his services free through the subcommittee on hospitals of the Mayor's Committee on Defense of New York City to plan and supervise the sectioning of any hospital which is tendering its facilities free to the nation in its present crisis.

heads of the beds being provided with special non-swiveling casters for this purpose, the nurses or attendants simply lift the bed by its foot and trundle it and the patient out of danger.

In the matter of fire signals, which are an essential feature of this plan, steam whistles, large gongs and telephones, the noise of which is known to have a bad effect upon the sick and helpless, were eliminated and flash lamps and

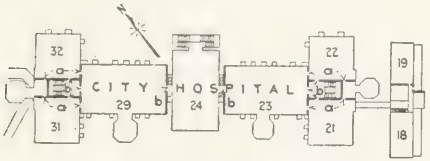


Fig. 1. Plan of City Hospital building, showing old walls utilized as fire walls. Heavy lines indicate old walls utilized as fire walls. Letters a and b indicate type of fire doors.

tappers substituted in their place. These signal in the endangered section only and not in the adjoining section.

In the dormitories and service buildings, where the attendants are whose assistance would be required in case of fire, loud signals are utilized.

In many of the older buildings of the department of public charities, existing walls were found in strategical positions which at very little expense were developed into fire walls without undue annoyance to the patients or in any way changing the regular and accustomed use of the space within the building. In fact, it was found that very few new fire walls had to be constructed.

A great advantage possessed by this method of protection to property and life is that it limits the fire hazard to a fraction of the property, and a correspondingly few people have to be moved. This reduction in the number of endangered patients enables the few employees to take care of them. It has the further advantage that the stairways and fire escapes in the endangered section are free and unobstructed, thus enabling the fire-fighting forces to reach the fire in the minimum of time and fight it with the maximum of efficiency.

There are three essential features in this safety method, viz.: the fire wall, the fire signal system and the casters. All three must be present to insure successful operation.

This treatment of non-fireproof buildings renders them substantially as safe for their occupants as if they were fireproof. It is, therefore, recognized by the fire insurance companies as sufficiently advantageous to reduce considerably the fire insurance rate, so that the expense of the changes should be covered in a short period of time.

The usefulness and serviceability of the old-type, non-fireproof institutional buildings being, therefore, indefinitely prolonged by this treatment, a result is attained which could not otherwise be realized short of their entire reconstruction at enormous expense.

A very good idea of the manner in which all the buildings were made safe can be obtained by a description of the treatment of a few that are typical.

That of the main building of the City Hospital group will be an excellent illustration. The building is located at the south end of Blackwell's Island. It is five stories in height, with a basement. It has stone walls, wood interior, and a wood roof covered with slate. Its capacity is 1,000 beds, and its normal occupancy when filled with patients is from 1,400 to 1,500 persons, there being 400 to 500 nurses, attendants, surgeons, visitors, help, etc. A large number of the patients are bedridden and helpless. One fire-engine company is located near the middle of the island, which is two miles long and requires five minutes to reach the building. Other fire-department apparatus and men from Manhattan would have to be transported by boat and under the most favorable circumstances could not reach the

Fig. 2. Typical buildings to which fire walls have been added—dormitories for aged male inmates, Farm Colony, Staten Island, New York. In the building on the left a new fire wall, shown projecting above the roof, has been built. In the building on the right an existing wall has been made into a fire wall.

building in less than forty minutes. A fire in any part of the building would endanger the whole structure and annex and would jeopardize the lives of all the occupants.

The accompanying floor plan (Fig. 1) indicates that the building consisted originally of a central structure (24), two wings (23 and 29) were added later, and after that an addition to each wing (21, 22, and 31, 32) with finally an annex (18, 19), connected with the eastern addition by a bridge at the second-floor level. The heavy dividing lines indicate existing masonry walls occupying strategic positions that were converted into fire walls, thus dividing the main building into seven vertical sections or fire units

(as they are designated) and the annex into two additional units. Between units 21 and 22, and 31 and 32 are fireproof stair halls and stairways inclosed by brick walls.

All the walls converted into fire walls were extended through the attics and roof and to an average height of 3½ feet above the roof and were stonecoped. The woodwork on opposite sides of these walls was thoroughly isolated. All openings in these walls, except specified doorways

Fig. 3. Fire doors and horizontal exit, dormitories for aged male inmates, Farm Colony.

used as horizontal exits and designated as A and B doorways, were bricked in solidly the full thickness of the walls. Where there was any probability of fire spreading around the ends of these walls, one or two vertical lines of windows were fireproofed by substituting metal trim and sash and wire glass for the existing windows. All wood cornices and projecting wood roofs within 5 feet on each side of the line of the wall were

Fig. 4. Hospital for Feeble-Minded Children, Randall's Island, in which existing walls have been utilized as fire walls.

replaced by hollow metalwork, fire-stopped along the line of the fire walls and duplicating in design and color the woodwork replaced.

All the present woodwork in the door openings in the fire walls was removed, including all trim, flooring, etc. The head and jambs were finished in hard plaster, and a concrete cement-finished sill was built up from the wall by corbeling out the wall on each side of the opening, so as to extend under the fire doors in the closed position in all cases. Standard sliding fire doors protect all openings in the cellars and attics, and standard hinged fire doors, finished in harmony with the trim of the wards into which they open, protect the openings in the other stories.

In all cases at least two exits of sufficient capacity to move beds through them and as remote from each other as practicable are provided on each floor in each fire unit. Helpless patients are placed on beds near these exits, and the beds are fitted with special non-abrading, ball-bearing, non-swiveling casters with 3-inch diameter wheels for the head legs only. This arrangement preserves the stability of the beds the same as usual and permits the easy removal of the patient in his bed by a nurse or attendant lifting the bed by its foot and wheeling it away.

The fire-signal system in this building is designed to adapt it to the improved conditions. The signals operate only in the one fire unit in which the fire occurs and in no other. Every signal is nevertheless transmitted automatically to the central office and the shops, dormitories and other service buildings, apprising them of the fire and its location and thus summoning assistance without delay.

Numerous details required attention so as to perfect the safety scheme. In many cases water, steam and sewer pipes passed through openings in basements, cellars and attics that required fire-door protection. When the pipes were at the top of the openings, permanent brick transoms 8 inches thick and supported on channels were built in the upper part of the openings and the rest protected by fire doors. Similarly, sills were raised when pipes occurred at the bottom of the openings.

Occasionally, wood floor and roof beams were continuous through or over walls that were to be utilized as fire walls. Such timbers were cut at the wall and the ends separated by not less than 6 inches of cement mortar rammed so as to isolate thoroughly the woodwork on each side. When sufficient bearing did not remain, steel stirrups had to be supplied.

All wood beams supported by fire walls were required to be beveled so as to be self-releasing in case of fire on either side of the wall. Dormer windows within 10 feet of a fire wall and within 2 feet of the face of the exterior walls were protected by sheet-metal covering and fireproof window frames, sash and wire glass.

In the Infants' Hospital Building on Randall's Island, a brick structure three stories high, with a basement, with wood interior and wood roof covered with slate in the mansard portions and

with tar and felt in the flat portions, certain existing walls were utilized as fire walls. These were found to be more desirable for the purpose than walls coinciding with the projections above the roof. An interesting problem was presented by a long wooden piazza with wood roof extending along the entire north side of the building east of the west wing. The piazza extended around the ends of all fire walls. The best solution was found to lie in fireproofing 20-foot sections of the piazza adjacent to the ends of the fire walls. In the case of the dormitories for aged males and females in the City Home group, Blackwell's Island, where similar three-story wooden balconies skirted the fire walls, the latter were extended through the balconies.

PUBLICITY AS A MEANS OF EDUCATION AND SUPPORT*

Hospitals Dependent on the Public for Support Must Take the Public Into Their Confidence—Good Publicity Demands Standardization of Statistics and Financing

By FREDERICK D. GREENE, General Secretary of the United Hospital Fund of New York

THIS morning in the classic and pious town of Oberlin I took breakfast with two delightful old ladies. While I was trying to think of some topic of refined conversation, one of the ladies told this story. A certain aristocratic family in New York had a scapegrace son who disappeared. It was reported that his body had been found and taken to the morgue. The father, accompanied by an undertaker, went to identify the remains, which were not in the best of condition. The father, however, concluded that it was the body of his son, and said that, although the boy had been no credit to the family, he should have a first-class funeral, and gave orders to the undertaker. Just then the jaw of the corpse fell back and disclosed a set of teeth which showed that a mistake had been made. The father withdrew. The undertaker, after another look at the corpse, remarked, "You poor fool! You might have had a swell funeral if you'd kept your mouth shut."

Perhaps the reason why some hospitals seek no publicity is that they have sense enough to "keep their mouths shut." But such hospitals are not represented here it is safe to say.

In charitable matters, "Let not your right hand know what your left hand doeth" is good advice for the individual; but, for a public institution, a better motto would be, Do all the good you can, to all the people you can, and let as many as possible know it." Letting as many as possible know it is publicity.

How far some hospitals are from appreciating the importance of publicity may be illustrated by a few snap shots from my mental kodak.

"What do you do with reporters?" I asked the superintendent of a large hospital.

"I wouldn't let a reporter into the building. I had to drive one away twice last week," he replied.

His manner reminded me of a down-East farmer who declared that no tramp should sleep in his barn. And yet this hospital is doing an excellent work for the poor and is quite dependent on voluntary gifts, amounting to over $100,000 yearly. The foundation of its charitable income is quite insecure, resting like an inverted pyramid on very few contributors. If the leading benefactor should die without providing an endowment of at least two and a half million dollars, over three thousand free patients would have to be turned away yearly until a new body of contributors was developed.

Desiring to secure well-merited recognition for a crippled children's hospital, I offered to publish some pictures showing the excellent results attained. The progressive young superintendent with regret informed me that the leading surgeon was opposed to such publicity as being sensational and unprofessional.

A dentist who for years has given valuable time in a free clinic for school children was almost driven to sever his connection because he had offended rivals by allowing himself to be photographed at work, to illustrate a newspaper article intended to popularize this charity.

Not long ago I learned of a well-known but antiquated hospital, of which half the beds were empty. A visitor seeking information was rebuffed on the ground that the public was giving almost nothing and was not entitled to investigate it. Within a month a certain old maid, whom it would be harder for a financial agent to discover than a needle in a haystack, confided to me that she had lately cut out from her will a $30,000 bequest to that hospital, and given it to another which she knew more about. There was no connection between the particular visitor who had been rebuffed and the old maid, but there was a connection between the gen-

*Read before the American Hospital [illegible] annual session, Cleveland, O., September [illegible]

eral atmosphere of that hospital and the loss of $30,000.

These cases are not cited as typical, but rather as "horrible examples" that are passing away. The value of publicity is now generally appreciated, certainly by this audience. What we are here for is to exchange practical suggestions as to how we may secure it.

Let us remind ourselves at the outset that the subject reads, "Publicity as a Means of Education *and* Support." This is a recognition that the two objects, education and support, while related, are worthy ends in themselves. That is to say, the popularizing of its knowledge and experience in the cause and cure of disease is a legitimate function of a hospital as well as a means of securing support. Indeed, a fully endowed hospital with no need for money, if you can imagine such a thing, might well devote some of its energy to teaching people how to avoid becoming hospital patients. Are not hospitals as a whole somewhat behind the times in this matter? We have had for years university extension, library extension, agricultural extension, public school extension, church extension. Why not hospital extension? Boards of health are recognizing that they have a teaching function and are exercising it through the press and by bulletins, advertisements, lectures, etc.

Some hospitals have already made a good beginning in this line. Training schools for nurses have long been an integral part of their work. The opening of hospital wards for the clinical instruction of medical students has proved advantageous to both hospital and college. Mothers convalescing after childbirth are taught how to feed, bathe, dress, and rest the baby, and how to care for themselves. Instruction given to tuberculous patients may well be extended to other classes. The out-patient department offers an unlimited and very profitable field. Visiting nurses and social service workers are also essentially teachers if they realize their full opportunities.

Due emphasis in the publicity campaign should be given to all these educational activities. There is no doubt that they would attract the favorable consideration of discriminating givers. Witness the large amounts that are being continually poured out for education in other lines. "What is its educational value?" is one of the first questions of the Rockefeller Foundation regarding any object.

Coming now to the practical problem, "How can publicity for a hospital best be secured?" I would suggest:

1. Adopting the policy of publicity. The president and the chairman of the executive committee, especially, should be alive to the importance of making effective provision for interpreting to the public the activities and wants of the hospital. Money well used for this purpose is well spent. All hospitals maintained by taxation or by voluntary gifts are public institutions. They are under moral and should be under legal obligation to give a full account of their stewardship. It is often necessary to educate a board of trustees. The best way may be quietly to do some good publicity which they will see should be extended. In the case of municipal, county, or state institutions, it is not well to rush into print regarding abuses or bad equipment until the matter has been clearly put before the responsible authorities. But if they refuse to make proper provision there should be no hesitation in giving full publicity to bad conditions. No man is fit to be a public official who is disloyal to the public—the major partner.

2. Some definite person should be in charge of the publicity. This person may be one of the officers or the superintendent or an outside expert, either voluntary or paid. Good publicity involves so much journalistic instinct and experience and such technical knowledge that it cannot be secured without the advice of one possessing these qualifications. Moreover, the thought and time required are more than can be expected from the average superintendent burdened with numerous harassing details. And, again, those who are engaged in the actual work of the hospital are too close to it to see it in its proper perspective. Under a constant routine they grow blind to the features that have news value—that are unfamiliar to outsiders, picturesque, humorous, pathetic, and romantic. There is, therefore, a psychological as well as a technical need for someone who can approach the subject with freshness of spirit and lightness of touch. In every community there are newspaper men, advertisers, and artists who will be glad to "do their bit" along this line if the matter is properly put up to them as a social service.

3. Do not expect bricks without straw. Newspaper men as a class are public-spirited and sympathetic and can be trusted, but they are not omniscient. A hospital superintendent cannot spend his time better than in enlightening a reporter so that he, in turn, may educate the public. "A nose for news" is one of the chief assets of a good publicity man.

Utilize his instinct and cultivate a "nose for news" yourself. Even trifling incidents, if unusual, will serve as a peg on which to hang many a "story" for the papers. Life is so much of a repetition that any bit of color is welcomed. But

unless these incidents are watched for and preserved they are lost. The admitting officer, the house staff, the nurses, the social service visitors, the dispensary workers, the treasurer—all, should be encouraged to notice and report anything of possible news value. Whoever is in charge of the publicity can use the incidents not only for the press, but also in circulars, in the annual report, and in letters of appeal.

Hospital statistics we must have. But at best they are the bones of the subject, necessary for strength, but unattractive. Clothe them with flesh and blood and make them pulsate with heart-throbs.

4. Form and time have much to do with newspaper availability. Half a dozen paragraphs on different days are more likely to get in and will do more good than a three-column article. As Saturday and Sunday produce little news, Monday papers will often carry matter that would be crowded out on other days. Remember that good copy is likely to fail of insertion if received too late. The effort to smuggle appeals in with news is not wise and may throw out the whole. Items of real value carry their own appeal. It is always safe to leave out the "moral of the story." Don't depend on pull with the editor, or try to go over his head. Make your stuff worth while or you will wear out your welcome.

5. Cultivate good will. It is too much to expect that the general public will retain many statistics about your hospital. People read so much and so carelessly that their minds become like sieves, often with big holes in them. But, though they do not retain many facts, they do retain impressions, and it is their impressions upon which they act. See to it, therefore, that, with the facts to justify it, you establish a reputation for doing a large work, vital to the community and permeated with genuine sympathy. There is a widespread impression that a hospital is a cold, cheerless, impersonal place, wrapped in officialism and tied up with red tape. As a matter of fact, a hospital is a place where people come in pain and find relief, come in weakness and go forth strong, come despondent and return with courage. There are few families that do not have grateful memories of what a hospital has done for one or more of their circle. Capitalize this feeling.

Publicity is turning facts into news. The hospital must furnish the facts. It should be able to give straight answers to all fair questions regarding its work, income, and expenses. Its statistics should be significant, accurate, up to date, and uniform with the practice of the best hospitals. Uniformity presupposes standards, the establishment of which is one of the most useful services that the American Hospital Association can render. The efforts now being made in this direction are very encouraging. Much has been accomplished in New York as a result of a conference held ten years ago, which recommended a system of uniform hospital accounting. A full printed description of this system can be obtained by sending to the superintendent of the Presbyterian Hospital, New York City. The United Hospital Fund of New York has accelerated the adoption of this system by requiring that it be followed in the reports made to the Fund by all hospitals which receive its appropriations. A modified form of this report blank has been adopted by the Cleveland Hospital Council. These reports must show, among other items, the number of free patients, public charges, part-paying patients and full-paying patients, together with the number of days of treatment given to each class. They also show the cost of the hospital work proper, of the out-patient department, and the corporation expenses. Without the careful segregation of such items, hospital statistics are useless for comparison, and per capita costs mean nothing.

When the daily per capita cost for ward patients in distinction from private patients was first required, some hospitals asserted that there was no difference, or that if there was it could not be ascertained. They were gently but firmly informed that the appropriations of the United Hospital Fund were based upon the number of free days of treatment given by each hospital, and that these days could not be calculated without knowing the per capita cost of ward patients. All our forty-six hospitals are now furnishing these significant figures, though some of them have had to improve their bookkeeping greatly and introduce proper auditing methods. This, however, has proved a distinct advantage in providing better control over expenses. More accurate data have furnished also a basis for making more convincing appeals, and a ground for securing higher compensation for city cases and for patients coming under the employers' liability law.

Both good publicity and good business demand up-to-date methods in hospital statistics and finances. These matters should receive the personal attention of superintendents and treasurers, guided by whatever expert advice they may need. Too often they are left to inexperienced clerks whose work contains glaring errors, damaging to the institution. Even where there is a good system of bookkeeping, the treasurer's statement in the annual report is sometimes so vague and unintelligible as to suggest the intent to conceal rather than to give information. I knew of a

business man who was about to withhold a gift from a hospital whose statement of expenses contained the following large general amounts, which should have been analyzed and distributed under intelligible items:

General expense	$ 26,772.44
General supplies	91,129.98
Hospital expense	12,424.15
Hospital Association	3,409.65
This made a total of (generalities)	$133,736.22

I took pains to convince the gentleman that the hospital, nevertheless, was worthy, and also to convince the treasurer that a policy of obscurity does not pay.

The United Hospital Fund of New York tabulates the uniform statistics of the work, income, and expenses of its forty-six hospitals and publishes them on one large sheet. This shows at a glance the condition of each hospital and its relation to the others, and gives a bird's-eye view of the whole field.

CHARITABLE ADVERTISING

With your permission, I will use my first experience in charitable advertising to illustrate some of the factors of success in this form of publicity. Over ten years ago we were trying to establish a new hospital at Sea Breeze, Coney Island, for children suffering from tuberculosis of the bones and glands. Mr. Rockefeller had agreed to give $125,000 if the Association for Improving the Condition of the Poor would raise a like sum by June 30, 1906. Only a few days remained, and we were still $50,000 short. One morning, on a half-hour railroad trip into New York, an advertisement came into my mind and was jotted down on the back of an envelope in almost its final form. It was set up the size of a magazine page and made into a plate that could be easily duplicated. I then took this plate to the publishers of about forty leading periodicals and they readily consented to insert it free as their contribution to the cause of crippled children. Some of you may recall this advertisement, which was entitled "A Cheerful View of a Serious Situation."

The success of this advertisement was due perhaps to the following points:

1. Half the page was taken up by a picture of "Smiling Joe," a four-year-old cherub suffering with Pott's disease of the spine, strapped upon a Bradford frame, where he had lain for a year. This was an eye-catcher which stopped the reader, no matter how fast he turned the pages.

2. The problem was focused in a concrete individual case understood at once by all.

3. The text was brief and clear, covering three points: Joe had been strapped to the board for a year, but he was getting well and smiling. There were 5,000 like him in New York tenements, but a movement had been started to save them. The sum of $250,000 must be raised by June 30 to insure Sea Breeze Hospital, but only $50,000 was lacking.

4. The advertisement was pleasing in spite of its pathos. A picture of little, emaciated Max would have shown the terrible disease more vividly. But no magazine would have wanted it. As it was, people actually cut out "Smiling Joe" and kept him on their desks to drive away the blues.

The "Smiling Joe" advertisement appeared in magazines with a total circulation of five million copies. It stimulated interest and brought inquiries from all over the United States from individuals, municipalities, and state boards. Several newspapers gave a whole page to the subject. A request came from the St. Louis fair that Joe be sent on as an exhibit, which, of course, we turned down.

The value of this bit of publicity was very great for education, but disappointing for support. The direct cash returns were not over $5,000, which was less than the advertising space would have cost had it not been free. Probably many who did not send cash to New York were moved to help crippled children in their own cities, and that was one of our objects.

You will be interested to know that on the morning of June 30 we were still $35,000 short. The *Tribune* printed a two-inch editorial which I had handed in the night before. This was read by a retired business man unknown to us. He volunteered to make up whatever deficit there might be at the end of the day. This amounted to $23,000, for which he promptly sent his check. The acquaintance thus formed led him before long to give half a million dollars to the same trustees for a home to treat and instruct poor mothers convalescing after childbirth.

There is no doubt that paid advertisements in newspapers are worth while as part of a campaign of education for large organizations with an important social program. This form of publicity has been rapidly increasing. It has been resorted to by railroads and other corporations which desire to affect public opinion. The war relief committees and the Red Cross have found it useful also in raising funds. Where the cause is a great one and the need urgent, and with a strong claim upon popular support, paid advertising is no doubt wise.

It has been pretty well established that for average hospitals paid advertising does not pay in direct returns under ordinary circumstances. It may be worth while, during a short intensive cam-

paign for a new building or an endowment. But even then the local press would probably donate the space. People look for the news. Advertisements may be thrust in their faces, but they instinctively avoid them as a pedestrian walks around a puddle in a road.

The limits of this paper do not permit a discussion of other forms of publicity, some of which will be treated in separate papers. Every hospital should issue an annual report and make it, as far as possible, a human document edited from the standpoint of the average reader. Much that now appears in hospital reports is of no use to anybody and is not even looked at by one out of a hundred. I refer to such features as the constitution and by-laws, the long pages of medical and surgical statistics, lists of former presidents, trustees, doctors, interns, nurses. One New York hospital uses fifty-two pages in listing nurses and officers. The constitution and by-laws should be printed separately for the use of the small number who are interested. The medical and surgical statistics may be tabulated and kept on file in the hospital and printed as a separate document if sufficiently called for. Medical statistics should be published in condensed and intelligible form and the same is true of the treasurer's statement. The latter should be accompanied by a certificate of audit. A liberal use of pictures will greatly improve the annual report, and these pictures should be changed from year to year.

Letters of appeal are one of the most effective mediums of publicity. They should have the same qualities required for good press work, namely, human interest, simplicity, and directness. Illustrated folders telling the work and needs of the hospital in a nutshell are good both as enclosures in letters and for distribution at public gatherings. Lectures and illustrated posters have been found useful in promoting social work, and might be used also by hospitals.

PERSONAL WORK

Perhaps the most effective form of publicity is that which is done by volunteer men and women who inform themselves as to the work and needs of the hospital and make personal appeals in its behalf. The mere fact that they themselves contribute and are willing to work for the hospital goes a long way in securing aid from others. Such efforts are most effective when carried on by a corps of workers under the stimulus of some active leader who may be a busy man of affairs or a woman of social leadership. Additional zest is given to the work if there are rival groups. Separate work may also be carried on among the young people; for instance, girls from 16 to 21 and children from 12 to 16 years of age. Such groups may be interested in working for a specific object, such as maintaining or endowing a bed. There is nothing like personal service to deepen interest and make it permanent.

We must educate the public to a clear understanding of the relation of hospitals to public welfare. They are as necessary as the fire department or the police. They arrest germs that are more dangerous than burglars, and check epidemics that would be as disastrous as a conflagration. They are human repair shops, without which our cities would be choked with human scrap heaps, and the whole social fabric would deteriorate.

It is a mistake to put hospital propaganda too much on a "please" and "thank you" basis. Why not seek to make the giver feel that it is his affair as much as yours? Do not approach him as a suppliant. Put yourself on his level and assume that he is as kind-hearted and as ready to do his part as a good citizen as you are. This will preserve your self-respect and win his.

To a very great degree disease is not the fault of the individual, is not within his power to control, and is not limited to him in its evil results. In other words, the community—the whole of us—is largely to blame for disease. We all suffer from it or for it, and everyone of us must help to fight it.

The health of a community is its chief asset, and to protect it is a primary duty. Should we not work for the time when facilities for guarding against ill health will be provided by the community as widely and as freely as it now provides against illiteracy?

Like Alpine climbers, we are feeling our way upward over new and difficult places. We should, therefore, pass a rope of safety around every member of society, so that each may receive and contribute to the strength of all. Let us recognize even class consciousness, not as an evil, but as a step toward race consciousness; that is to say, human brotherhood. When we get to the point of not only professing belief in equality of opportunity for everyone, but of really desiring and working for it, then strife within and without our borders will cease and wars shall be no more.

One of the greatest observers of human things (not physiological) says, in another language, "Where there is sun there in thought." All physiology goes to confirm this. Where is the shady side of deep valleys there is cretinism. Where are cellars and the unsunned sides of narrow streets there is the degeneracy and weakliness of the human race—mind and body equally degenerating. Put the pale, withering plant and human being into the sun, and, if not too far gone, each will recover health and spirit.—Florence Nightingale, "Notes on Nursing."

STANDARDIZATION OF HOSPITALS—CLASS V, SMALL SEMIPUBLIC COMMUNITY HOSPITALS

Improperly Planned Small Hospitals Become Community White Elephants—The Training School Problem—Honesty a Prime Requisite in Laboratory Service—Value of Out-patient and Social Service Department to Small Communities

By JOHN A. HORNSBY, M. D., Chicago, in Collaboration with MISS MARY WHEELER, Principal of the Illinois Training School, Chicago; DR. SOLOMON STROUSE, Former Pathologist in and now Member of the Medical Staff, Michael Reese Hospital, Chicago; MISS RENA S. ECKMAN, Former Dietitian, Massachusetts General Hospital, now of Teachers College, Columbia University, New York; DR. J. T. CASE, Roentgenologist, Battle Creek, Mich.; DR. EDWARD S. BLAINE, Roentgenologist, Cook County Hospital, Chicago; MR. E. C. LARSON, Former Accountant, now Assistant Superintendent, Michael Reese Hospital, Chicago; MR. MICHAEL M. DAVIS, Jr., Director, Boston Dispensary, Boston, Mass.

THE small semipublic community hospital, of the capacity ranging from five to fifty beds, scheduled as Class V in our scheme of classification, is before us this month for discussion.

This is one of the most important classes of hospitals that we have to consider. Almost every community of 2,000 people or more, and even towns of a thousand people where there is a considerable rural or semirural population dependent on the town, can and should have a hospital of some sort, and this group is all the more important because, in a vast majority of the communities where only a hospital of this small size can be thought of, there is no trained or experienced person in the community who could lend material aid in the organization, financing, designing, and building of the administrative forces available. As a rule, the doctors in such a community have not had hospital experience either in medical service or in any administrative directions. Usually it is the first hospital experience of men and women who may be chosen trustees of such a hospital. Consequently, the problem, while simple in itself to the trained hospital mind, is a most complex one for those who are obliged to undertake its mastery.

We cannot demand of such a hospital anything like the elaborateness of architecture, of equipment, or of work that we demand of most other institutions, because, as we have said, the whole problem must be met by untrained people, and all the community has before it in the shape of a problem is a demand for institutional care of its sick.

So great is the ignorance of such a community in regard to a new hospital that they don't even value and are unable to appreciate help from the outside from some trained hospital man or medical men, or graduate nurse who has had executive experience.

As a rule this community undertakes to "swing" its new hospital proposition by getting in touch with a builder or contractor who may have influence and who lives in the community, and they send him about the country to see some hospitals approximately of the size and character that they are thinking about; this man, totally inexperienced in hospital architecture and designing, and completely unable to coordinate what he may see abroad with what his own people need, comes back home with a trunkful of blue prints and proceeds to design something that he has seen elsewhere, and it is the easiest thing in the world for him to persuade the new board of trustees and those interested in the hospital that what he is doing is "the last word" in modern hospital construction.

The result is that many small hospitals that have been built of recent years and that will be built in the next few years are monstrosities of architecture, incapable of economical administration, and because of these defects "white elephants" saddled on the community. Then, too, such a contractor or builder is perforce unable to make a proper survey of the community to determine the needs of the community in regard to the size and the apportionment of space for the various hospital services; consequently, he gives to the community a one-sided institution, built so rigidly, from its inception, that future needs cannot be provided in any economical way. He builds, for instance, a hospital of twenty-five beds, let us say, with administrative areas that may barely accommodate this small unit of patients without any provision whatever for administrative space to take care of future expansion. The result is that when a second unit is required to take care of additional patients the administrative spaces already built are wholly inadequate for the administration of the additional beds; the net result of this miscalculation is either the necessity to tear out and provide more administrative space or just to go ahead and build more beds without reference to the necessities of administration. This means that patients throughout the hospital, after the addition is built,

will not receive proper attention and proper nursing.

It will not take the community very long to find out, usually through the experiences of members of the medical profession, that its sick are not receiving that scientific care that was promised before the hospital was built, and that other hospitals in their communities are following. The chain goes along; the hospital becomes unpopular, and interpreted, this means that support will be withheld; the hospital will be on financial rocks almost immediately, and with financial limitations service will have to be cut down, and so is built up a long chain of inefficiency and inadequacy that will limit the usefulness of the institution very greatly.

This is neither the time nor the place to discuss the architecture or the details of equipment of these small hospitals; that has been done elsewhere and many times. The theme that lies just before us is the discussion of what the sick have a right to expect in the way of scientific care and comfort in these small hospitals. Those interested may look back over our schedule of preceding months for the various markings of the hospitals that we have already discussed and the same classification and schedule can be used for these small hospitals.

Let us now touch the high lights in the departments of these small hospitals, one by one, and try to fix some standards:

THE MEDICAL STAFF, INCLUDING INTERN STAFF AND NURSING STAFF

The Visiting Staff.—We have no compromise to offer in regard to a visiting medical staff for these small hospitals. We believe that a responsible medical staff is absolutely necessary if we are to have a definite technic for the care of patients in any hospital, whether it be large or small, general or special. But in such a community hospital the function of the visiting staff may not be quite so elaborate as the similar work in a more pretentious institution; but there ought really to be a medical staff, and the staff should be divided according to the various services and each of these services should have a responsible head or chief, even though such service be very small—even negligible—because if we do not encourage the creation of all the services and encourage the medical men in the community to measure up to the necessities of these various services, we are going to have an indifference and a one-sidedness in the viewpoint of the staff from the very inception of the institution.

To illustrate: if we do not have in the hospital an eye department presided over by the best man that can be found in the community who is specializing on the eye, it is quite certain that eye diseases in the hospital will be tinkered with by almost every man on the staff; the nose, throat, and ear man will do some eye work, and even the general surgeon, usually quite innocent of any special knowledge of diseases and the surgery of the eye, will undertake work in that field. If there is a surgical service and not a gynecological service it is certain that the general surgeon will undertake to do gynecology, and we have all come to understand that gynecology is a very special branch of surgery, in a very specialized anatomical field; we are moving so rapidly toward definite standards in gynecological surgery that the general surgeon is not equipped to do deep pelvic work. So we might go on indefinitely through the departments and find that, for the lack of a definite service, all the members of the staff are ranging over the whole field of medicine, in their practice, not only to the detriment of good work, but toward the creation of a chaotic condition in the profession in the community, because never was the adage, "jack of all trades, and master of none," so aptly illustrated as in just this situation.

On the other hand, if all the services are represented in the hospital, the staff members will come to recognize these divisions of medicine; they will acquire the habit of referring cases to the specialists in the several departments, and in the end members of the staff will have an opportunity, and, indeed, will be compelled to concentrate within the narrow limits of a specialty, and very much better work will be done throughout the institution and throughout the community.

There ought to be a chief to each one of the services, medicine, surgery, obstetrics, and children, major branches, and of the specialties, the eye, ear, nose and throat, orthopedics, neurology, genito-urinary, and the infectious diseases. If the hospital intends to accept tuberculosis there must be a chief of that service also. If the profession in the community will permit, each service ought to have, in addition to the chief, at least one associate, and it will be better if there are two, even though the work be extremely little, because the very fact of a man's being designated for a special service will stimulate him to study and perfect himself in that service, and in proportion as all the men on the staff acquire skill and experience, just in proportion will their work be successful and the hospital prosper, and just in that proportion also will the hospital become a center for an ever-increasing clientele out through the community and into other communities. We know at least one of these small hospitals that attracts patients from two or three hundred miles around,

and, although it is located in a small town that ought to be well supplied by a hospital of fifty beds, this hospital has now gone on growing during the past six or eight years until it has two hundred beds and attracts patients from far beyond its natural clientele. This result is due to a carefully organized and strictly administered medical staff and to team-work, composite study of cases, group diagnosis and scientific care. Any community can do the same. A small hospital whose staff is organized in this way ought to be given a high mark in any attempt to standardize this hospital.

The Interns.—There ought to be one intern for even the smallest hospital, and one intern will probably serve all the needs in a hospital of twenty-five beds or under. If there are more than twenty-five beds there ought to be an additional intern, because we have rather come to feel that one intern cannot take care properly of more than twenty or twenty-five patients. We are not now going to discuss the difficulties of obtaining proper interns in these small hospitals, excepting to say that the reason why interns are hard to get is that the facilities for acquiring training and experience in such an institution are usually very limited. But in proportion as the staff is well organized and the men are kept on their tiptoes to serve the hospital and their patients, just in that proportion will also be the attractiveness of the hospital as a place where interns may get proper training, and if the hospital staff and if the hospital itself is what it should be, irrespective of any limitations in architecture or equipment, there ought not to be great difficulty in obtaining interns.

The intern in a hospital is just precisely what the visiting staff makes of him, and the results of his internship will be an expression of the ability of the staff in the hospital to teach. It does not require much time for medical schools and prominent members of the profession to learn just what any given hospital is doing for its interns, and hence the ease with which a hospital can get interns under proper conditions is altogether up to the hospital itself.

Interns ought to have some definite rules to live under; rules that are administrative in character rather than professional, and, if each medical service lives and works under rules, these rules apply also to the interns, and, interpreted, they will mean efficiency and a technic that has been thought out and is carefully administered.

The Nursing Service.—The nursing problem in these small hospitals is extremely complex. There is a disposition on the part of some of the states to refuse permission for hospitals to maintain training schools until they have a certain number of beds. For instance, in Kansas a hospital cannot maintain a training school unless it has an average of twenty-five beds occupied. It seems to us this is rather the wrong way to go about the matter, and that very much more depends on the quality of the training that a pupil nurse can get than upon the number of beds in the hospital. If the hospital has high ideals and the medical staff is an active and aggressive one, then the nurse training ought to be good and the limitations in the number of patients ought at least to be compensated for by the better individual training the pupil nurses can have at the hands of the doctors, under their own superiors; that is, the head of the training school and her assistant or assistants.

There is no good reason for the lowering of standards for applicants for the training schools in these small hospitals; indeed, a small community hospital under the inspiration and stimulus of the medical men working in it ought to command a high grade of material for pupil nurses. Much depends on the morals and the morale in the hospital; if these are good, then the community soon learns that fact and the daughters of well-to-do people, young women of breeding and education and refinement, will prefer to go into training in a hospital in their own community, if it is a fit place for them to live, rather than to go away from home among strangers.

Of course, everything depends on the head of the training school. In these small hospitals usually the head of the training school is also the superintendent of the hospital, and she ought to have at least one assistant, even in a very small hospital, because the superintendent has to do the buying, has to attend to the wants of the medical staff, generally has to act as housekeeper, and she will be in luck if she doesn't have to keep the books also and admit patients. So, that in any event she will need an assistant, who would better be called assistant superintendent of the hospital than principal of the training school, because as assistant superintendent of the whole institution the scope of her activities with the training school will be a little broader than they would be if she were narrowly confined to the training school itself. This, of course, is true only in a small hospital where family life and intimate association are at their highest. There must be a distinct place for the pupil nurses to live, and there must be school rules and home rules for their guidance because one of the principal features of the training of any young man or any young woman is in discipline, self-discipline, and self-control. While rules need not be made obnoxious there certainly ought to be definite rules, and they ought to be lived up to. It

seems to us that when a superintendent of one of these small hospitals is in doubt about a rule for her nurses or for the interns, there is one yardstick by which the wisdom of such a rule or policy can almost invariably be settled, and that is by the rule of good sense and by the every-day experiences of life.

Obviously, it will not be possible to conduct a training school unless practically all the services are represented, but there is every reason in the world why all the services should be represented in a community hospital, and not a single reason why any class of patients, suffering from any disease, should be declined. This is supposed to be a community institution and it is supposed to take care of the ills of the community, and every community at one time or another will have all the ills that flesh is heir to. The moment the hospital declines certain classes of patients, just that moment the hospital lays itself liable to be prohibited from conducting a training school and compelled to enter into some sort of affiliation with other institutions where the pupil nurses can get an all-round fundamental training in all branches of medicine.

We are purposely not taking up the question of the two-year versus the three-year course of training for pupils, because, whether the school is a large or a small one, the training ought to be complete, and we have pretty unanimously arrived at the conclusion that a two-year school does not give adequate training to pupil nurses, especially in view of almost continuous additions to the curriculum during the past few years.

Just one word more: in marking a training school for purposes of standardization, in these small community hospitals an institution that compels its pupil nurses to do the work of domestics ought to have a very low mark; it cannot be a high-grade school. There is certainly work enough of legitimate nursing character for pupil nurses, and their time can be put to better use than to compel them to do chambermaid and domestic service.

THE LABORATORIES

It is too bad that we cannot allow a higher percentage for laboratories than 10 percent, because the laboratories are so extremely important in the modern hospital.

Just as Nature has provided intricate physical and physiological organizations of many small animals, quite as complex as that of the elephant or the mastodon, so the organization of a small community hospital must provide for the scientific care of patients, and in the same way as that to be had in large metropolitan institutions. Of course, there is a limit to this simile, because it is obviously out of the question for small hospitals in isolated communities to do the intricate and composite things in pathology that the large institution that has a high-salaried laboratory director in charge, with trained specialists at the head of each subordinate department.

The fundamental necessity in the laboratory branch of these small hospitals is just common honesty, a virtue too frequently lacking. Oftentimes it is not possible for these small hospitals to secure the services of a pathologist trained adequately in all the branches; frequently they must be satisfied with one of the younger practicing physicians in the community who has served a good internship and who has had good laboratory training in one of the large medical centers. Frequently these young men, while having a fair theoretical knowledge of the more intricate laboratory performances, do not have that working knowledge which will inspire confidence in the medical staff and which will give assurance of correct findings to patients.

Where it is utterly impossible to secure even part-time service of a laboratory director capable of doing all the work that we now understand hospitals should do, an excellent substitute is to be had in a frank admission of the inability of the institution to do certain thoroughly well-understood and frankly admitted things. For instance, it is absolutely criminal for a hospital to undertake to give operating surgeons differential diagnoses of neoplasms unless the work can be done accurately and scientifically. The best way for such an institution to do is frankly to admit its inability to furnish these accurate diagnoses so that surgeons may know how to act. Generally the operations for neoplasms can be postponed at least until the patient can be sent to some institution where differential diagnosis can be satisfactorily made.

There is no excuse for these small institutions not being able to identify the various organisms when the source and character of the infection is in doubt. A pathologist who cannot identify the commoner pathogenic organisms is not to be considered a pathologist, and the institution ought not to lean upon him.

Most antitoxins and serums are now furnished in stock and of good quality; any pathologist worthy of the name will be able to handle the administration of these adequately.

It goes without saying that complete blood examinations, complete urinalysis, and the examination of stomach and bowel contents should be made in these small hospitals. Spinal puncture, Wassermann tests, the Widal and the ability to administer the various local anesthetics for spe-

cial purposes are absolute necessities even in the smallest hospital.

Sometimes a laboratory director to do even these essential things is not available in the community itself; transportation is not expensive, however, and communities are within such easy reach of each other, as a rule, that it will frequently be possible for two or three institutions within fifty miles of each other to club in and employ a pathologist in common who can give a certain amount of time to each institution. Under such an arrangement it will not be long before a woman technician, who will be able to do the routine things under the direction of a trained laboratory specialist, can be broken in in each hospital. Frequently such a woman can be employed at other things in the hospital, such as the giving of anesthetics; often the assistant superintendent or even the superintendent herself will have enough ambition and fundamental training to enable her to grasp the essentials to the doing of the routine work.

But, as we said at the outset, the main thing in these hospitals is fundamental honesty, so that the members of the medical staff can be certain that any work attempted will be honestly done.

X-RAY DEPARTMENT

A good x-ray outfit in these small hospitals is a large element in the success of the department, and nearly every community has in its citizenship some man or woman who, if the need is properly presented, will donate to the institution an adequate x-ray outfit. For convenience we are giving a list of the essential things, with the approximate cost, in order that hospital administrators and trustees may present the need in itemized way to someone who might be persuaded to give the necessary funds.

X-RAY OUTFIT FOR HOSPITALS OF FROM FIVE TO FIFTY BEDS

1 transformer, 110 or 220 volts, 60-cycle A. C.	$450.00
1 radiographic tube stand	80.00
1 gas tube, 7-inch tungsten target	35.00
1 hydrogen tube fine focus	75.00
1 11-by-14 intensifying screen	47.00
1 diagnostic box	30.00
1 tube hanger for two tubes	3.00
1 hand fluoroscope and lead apron	21.85
1 lead protection screen	39.00
1 x-ray plate chest	16.00
	$796.85

OVERHEAD CONTROL SYSTEM

1 set wall insulators, 4-arm	$ 13.00
3 trolley cord reels	9.75
100 feet trolley cord wire	3.00
	$ 25.75

DARK-ROOM EQUIPMENT

3 8-by-10 developing trays	$ 3.75
3 11-by-14 developing trays	7.50
1 ruby light	6.75
1 dark-room apron	1.00
1 16-ounce graduate	.50
1 drying rack	1.25
24 packages developer	6.00
25 pounds C. P. hypo	1.50
2 32-ounce glass-stoppered bottles	1.50
1 midget shadow box	7.50
	$ 37.25

COOLIDGE TUBE EQUIPMENT

1 Coolidge tube transformer	$ 35.00
1 Coolidge tube regulator	35.00
1 insulated shelf	3.50
1 medium-focus Coolidge cathode terminal	1.25
1 trolley cord reel	3.25
	$ 78.00

Total equipment absolutely necessary for operation	696.40
Total of complete equipment	937.85

This includes equipment that greatly assists in operation of the outfit, but can be dispensed with at first and added later when desired.

DIETETIC DEPARTMENT

It is hardly to be expected that these small hospitals will be able to afford a trained dietitian, but the need for special feeding of certain classes of patients is so essential to treatment in this modern day that some arrangement absolutely must be made whereby the physicians can be assured proper special feeding of their special cases, at least in the diseases of metabolism. The old diet lists that many hospitals still stick to are now known to be practically worthless, and it is obvious that each patient requiring special feeding must be treated as an individual and not as one of a class. The initiative in this work must be in the hands of the medical men, and it is to be greatly regretted that the average medical man in the community in which one of these small hospitals is likely to be the health center does not adequately appreciate the diatetic needs of the sick, and, as a rule, has given absolutely no help to the person in the hospital charged with the business of feeding their patients.

It is the easiest thing in the world, if there is just one ambitious, energetic, and trained man on the staff, to inspire good dietetic work in the institution. The assistant superintendent or the superintendent herself will nearly always be found more than willing to study the laws of metabolism, the physiology of the digestion, and the chemistry of foods, and, if one medical man trained in these branches of the science will give her a little time and will study with her on special cases, it will not be six months before such a woman can be a tower of strength to the institution and able to meet all the demands of the profession. It is absolutely impossible for a cook to measure up to the necessities in this department because of her want of fundamental education.

It can be said without fear of successful contradiction that in any hospital, however small, that makes no pretense to feed the sick specially and in consonance with modern demands, the fault lies in

the medical staff and not with the hospital administration.

THE PHARMACY

Most states require that the pharmacy in the hospitals shall be in charge of a licensed pharmacist. This is certainly as it should be, because the pharmacist must be in charge, not only of the pharmacy itself, but also of the distribution of medicines to the various units, and he must also constantly busy himself with the adequate training of pupil nurses in the giving of medicines to patients. Where there is not a competent pharmacist, it is very certain that the hazards of overdosing and of giving wrong medicines are increased manifold.

It is out of the question for all these small hospitals to have in their employ all-time registered pharmacists, but certainly all of them can have part-time men secured from one of the drugstores in the community—some trained person who will spend a part of each day at the institution and who will pay sufficient attention to the details of the work to insure accuracy and carefulness.

The emergency medicines can be found by someone in the institution, preferably the superintendent herself, who will have been trained sufficiently to find the right emergency medicines and to see to their proper administration.

These small hospitals will be marked on the seriousness of their attempt to be sure of accuracy and of the standards of the medicines themselves.

It will not be economical for these small institutions to attempt to make up their fluidextracts and tinctures, and most medicines are now put up in stock form by the large drug houses in a way that will make them better for common use and in a way to keep longer than the institutions themselves could otherwise obtain.

DISPENSARY, OUT-PATIENT DEPARTMENT, AND SOCIAL SERVICE

If the modern hospital in general is to assume the role of health center in its community, then this role is doubly urgent upon the small community hospital. It must inspire and stimulate good health activities, must reach out into the community, and must lend a helping hand to those who are sick enough to require attention and yet not sick enough to be bed patients in the institution. So that, if there is a reason why hospitals in general should conduct dispensary and out-patient services, this reason is doubly insistent in these small hospitals. There should be a dispensary for out-patients and there should be a visiting nurse. It is inconceivable that, where the need for such service is made apparent to any one or more well-to-do people in the community, the funds should not be forthcoming. And, if such a department is worth while, it is certainly worth while that the work should be done well. The time has gone by when it is sufficient that a dispensary be advertised to be open at such hours and that one of the interns or some inexperienced young physician should be placed in charge to look at a patient's tongue, feel the pulse, and prescribe one of three or four stock medicines kept in stock in bulk. That kind of a dispensary is worse than useless because it inspires in those who patronize it a confidence not warranted by the facts. It will always be possible, even in these small hospitals, to secure the attendance in the dispensary of the staff men on the various services, at least for an hour or so two or three times a week. In pursuance of this policy the work will not be heavy on any physician, and each will be able to give a proper amount of time and the necessary care to permit a correct diagnosis and a proper evaluation of the patient's trouble.

Many ills from which the poor of the community suffer are due to preventable causes—bad air, improper sleeping arrangements, improper foods, improper clothing—and all these can be remedied by a visiting nurse.

We all have in mind the classical case taken from the files of the Massachusetts General Hospital, in which nine members of a family were attacked, one after the other, and repeatedly infected by the common itch. These nine members of the family were repeated patients at the hospital for a year or more at an expense to the institution of more than $250. Presently someone conceived the brilliant idea of looking into the cause of the trouble in this family, and a visiting nurse, a scrub woman, and ten cents' worth of soap broke up the infection and showed the people how to prevent its recurrence, and the whole affair was over. Similar service can be rendered in these small hospitals merely by careful inquiry and some initiative on the part of the dispensary or out-patient doctor and a good visiting nurse.

Every one of these small hospitals must make a serious attempt to conduct at least an inexpensive dispensary and out-patient service, and if they do not do so they are failing to measure up to the first essentials of a community health center.

MEDICAL RECORDS AND ACCOUNTING

As we have said in the discussion of larger institutions, there are no standards up to the present moment concerning the keeping of accounts and the medical records, but the results are quite as insistent in the small hospitals as in the large. There is no good reason why even the smallest hospital cannot keep good, serviceable accounts,

and there is less reason why it should not keep adequate medical records.

In the accounting it is necessary so to arrange the items of both expenditure and income that the superintendent can know at all times just what she is doing, which of her departments are making and which are losing money, and how much.

Just what shall be included in the per-capita cost of patients in these small hospitals is no better settled as a problem than in the larger institutions. It seems to us that the investment in the plant should not be included, nor the large expenditures for alterations or serious repairs, such as the laying of new floors or the installation of new sterilizers or apparatus. These items should come out of a building fund and should be treated separately, and in all annual reports the statement should be frankly made that they are treated separately, and at the same time the figures for such items should be plainly stated so that other institutions may make accurate comparison between their own costs and those of other hospitals of the same character. Every other item should be counted in the per-capita cost.

A vast majority of these small hospitals now in existence satisfy themselves, in the matter of medical records, with the plain vital statistics in each case; the name, address, social state, etc., of the patient. Rarely do we find an admitting diagnosis in any part of the record, and quite as frequently there is no subsequent diagnosis stated on the record. In most of these small hospitals the nursing chart is tolerably well kept. It is rare indeed to find even a urinalysis attached to the record, and almost never the slip showing any other laboratory work or finding. Operations are usually dismissed with a brief statement of "operation for appendicitis" or whatever the operation was—nothing about the results, nothing about what was found or what was done, or the result. Inquirers will often be told, when they express surprise at the paucity of the record, that the doctor keeps his own record. This is, of course, intolerable. The hospital itself must have a record of the admission of the patient, what was found upon admission, what was done for him, the revised diagnosis after careful examination, the treatment, and the result. There must be a history of the case with the etiology of the disease, and notes of the continuous progress of the case made by the physician treating the patient or by the intern representing him. In the case of surgical operations the record should state the disease for which the operation was performed, the method of procedure, the gross findings, the story of the anesthetic, and the progress of the disease subsequently. In a vast majority of cases in these small hospitals the diagnosis is made on the operating table, and many surgeons decline to allow a diagnosis to be entered on the record until after the operation. This leads to carelessness; indeed, its purpose is to hide carelessness and incompetence. A hospital that permits it is paying a premium for inefficiency.

ARCHITECTURE, INCLUDING ALL PERMANENT INSTALLATION, SUCH AS PLUMBING, POWER PLANT, ELEVATORS, VENTILATION, VACUUM CLEANING, LAUNDRY AND GARBAGE DISPOSAL

Most of these small hospitals are architectural atrocities. They are usually designed and built by contractors and builders who have not the slightest knowledge of what is to be done in the building after it is completed, and the result of this sort of building is a tremendous increase in cost of administration.

Unfortunately, when one of these small hospitals is contemplated, the work is turned over to citizens of the community who have had little or no experience in any sort of building enterprises and no experience whatever in the needs of hospital administration. If a fellow-townsman in the building and contracting business has friends on the board and can show a well-constructed two-story building to his credit, he is considered entirely competent to design and build a hospital. If these trustees only knew it, they would be ahead large sums of money, even in the cost of the building, if they would secure the services of someone trained to the work to advise with their contractor. This would insure the proper designing of the hospital so that it could be economically administered. Such a trained worker would be able also to select materials that would wear in the new hospital, so that large items of repairs would not have to be expended almost immediately upon the completion of the building.

In this country these small hospitals should almost invariably be so designed that subsequent additions could be made without interfering in any way with the homogeneity of the plan. Administrative space, for instance, should be planned to allow for subsequent expansion, and much of this administrative space could be used in the first instance for the occupancy of patients, to the end that, when the additions are made, some of these administrative spaces could be evacuated for patient purposes and turned over to administration. In a hospital of any considerable size about half of the total space of the building is used for administrative purposes. In the first unit of one of these small hospitals, two-thirds or three-fourths of the space can be designed for administration purposes and built according to the design, but

used as a part of the first unit for the occupancy of patients, so that only about one-third of the space of the first unit would be actually given over to administration and two-thirds to patients. This is the economical way of modern hospital planning.

Generally these small hospitals are located where city light, city water, and city sewerage are to be had, making it unnecessary to provide for these in the power plant, and the plant itself can occupy a small space in the basement and equipped solely for heat, with a small high-pressure boiler for sterilization, steam cooking, and the like. The units of such a plant can be selected so that if expansion is desired while the machinery is still usable the machines can be removed from the basement and installed in a separate building if desired.

The question of elevators must be settled in each individual case. It should be borne in mind that it is almost impossible, certainly inhuman, to undertake to get patients up and down even one long flight of stairs on a stretcher carried by people, and there should be one elevator for that purpose if for nothing else.

Ventilation in these small hospitals should be confined to the windows for patients, with transoms so that air currents may go through, and in the service rooms and utility rooms there should be air ducts to the roof with a fan installed at a common center on the roof so that odors can be pulled out instead of being allowed to escape into the halls and about the hospital. The installation of this simple arrangement is not expensive and a one-quarter horsepower motor on the roof will not be expensive to operate.

Vacuum cleaning is not absolutely necessary, and it will save money. It will keep the hospital cleaner, but will probably cost more to do the cleaning because mechanical cleaning has to be done anyway.

The laundry should have good machinery, with at least one metallic disinfector capable of steam pressure up to at least 15 pounds. If it is at all possible, the laundry space ought to be large, and it certainly should be well ventilated. The equipment should be greater than for the maximum number of pieces that the hospital is to have at the outset, because laundry work always grows, and if the laundry is built merely to capacity in the first instance there will be congestion, which leads to poor work and unclean and untidy-looking linen and cotton goods. Nothing is so detrimental to nice appearance as poorly laundered materials.

The sewage should be trapped, and, it goes without saying, should be vented. It is even more essential that sewer piping should be absolutely tighter than the water pipes should be. None but the best materials should be used in the sewer piping.

Garbage disposal is a very serious matter in hospitals. The problem is not yet settled. Local incinerators about the hospital are extremely expensive and unsatisfactory because they tempt nurses to destroy stuff that could be retrieved. Tight garbage cans in the service rooms and at various central points in the hospital are better, provided they are emptied at least three times a day and provided especially that there be some central place where their contents can be dumped out on the floor before incineration, in order to inspect and save the usable things that are thrown away.

EQUIPMENT—MEDICAL, SURGICAL, AND PHYSICAL

The surgical operating rooms, even in these small hospitals, will generally be adequate to the demands of the surgeon. The operating rooms are supposed to be show places in the hospital, and they certainly are not intended to be less in the average community institution. Generally the first installation of surgical appliances and instruments is adequate. If there is a good surgical nurse who has good support from the superintendent, she will be able to keep her instruments and apparatus in good order. Every piece of apparatus in the hospital ought to belong to the institution. It is unthinkable that each member of the surgical staff shall have his own apparatus and that the hospital must care for it for him. Special instruments for special purposes, belonging to the surgeons, can be kept in boxes with the names of the owners on, but these should be limited as much as possible and under no circumstances should the institution be compelled to pay for instruments for the use of any individual member of the staff.

There should be cautery apparatus, hoisting apparatus for the application of plaster casts, an almost complete set of the classical splints, and plenty of splint material that can be molded to individual cases. And, above all, there should be a definite place in which these splints and splint material are kept, and this place should be kept locked and under the control of some one person charged with the responsibility for its care.

It is a piece of good technical work for the surgical department to make up and keep in good working order the necessary boxes or cases for the special ward operations, such as venesection, spinal puncture, various irrigations, and the like. These boxes cost very little to put up and are indispensable in any hospital.

MANAGEMENT

The management of even the smallest hospital depends almost entirely upon the character and qualifications of the superintendent. A staff member, however interested he may be, cannot assume responsibility for the discipline, control, and good order of a hospital unless he is there all the time, and any staff member or trustee who undertakes to control things in the institution and be away from the place a greater part of the time has a mistaken idea which must lead to disaster. In such a case the people in the hospital come to recognize the trustee or staff member as the dominant spirit, and in that proportion the authority of the superintendent will be lessened, discipline will be broken down, and chaos firmly established. The wise trustee or staff member will do all his business through the superintendent of the hospital in so far as it affects the management of the institution, and he will hold the superintendent responsible for what is done. In that way only can discipline be maintained. There must be coordination of the administrative parts of the hospital with the scientific units. The hospital is a place in which to care for and cure the sick, and the administrative parts are merely cogs in the wheel of a machine. In too many hospitals the administration is the overpowering thing, and the technical departments are regarded as merely necessary evils to be borne with where they must and eliminated where they can be.

Cleanliness and order in the institution are secondary only to the performance of the necessary services to coordinate with the demands of the medical staff. One of the chief functions of the administrator is to command courtesy to everybody who has anything to do with the hospital. A hospital whose people are not courteous must be unpopular, and an unpopular hospital is a hospital that is always in straits for money and that consequently cannot render adequate service to the sick.

The American Ambulance Hospital in Paris

The American Ambulance of Paris, organized for the relief of the sufferers of the great war, took its name from a similar organization which rendered never-to-be-forgotten services during the Franco-Prussian war of 1870.

The first volunteers, surgeons, nurses, and untrained workers, were enrolled on August 3, 1914. On August 12 the partially completed buildings of the Lycée Pasteur at Neuilly-sur-Seine were requisitioned by the French War Department and turned over to the new organization.

On September 6, 1914, the first patients were received, and on September 9 a train of motor ambulances, dispatched by the hospital, with surgeons, nurses, and supplies, proceeded to Meaux and beyond. It was the first organized volunteer relief to reach the field of battle.

Since the day of opening, the history of the American Ambulance has been one of development and extension. The main hospital at Neuilly has a normal capacity of 575 beds, with provision for caring for 625 patients in case of emergency. In its equipment are comprised two general, one special, and two dental operating rooms, two x-ray plants, and pathological, research, and dental laboratories.

The patients treated in the institution have been exclusively surgical cases, and their injuries have in general been of extreme severity, as the American Ambulance has been reserved by the authorities for the treatment of *grands blesses*. From the first a speciality has been made of the treatment of the terrible injuries to the face and the maxillæ so characteristic of modern warfare.

Coincident with the Ambulance Hospital was organized the transportation department, which was progressively developed until, on August 1, 1916, upwards of 250 motor ambulances were in service in the field or in the entrenched camp of Paris. Up to that date over 135,000 sick and wounded had been transported, often under fire, and always under conditions requiring courage, tenderness, and great physical endurance on the part of the volunteer drivers.

The Paris section of ambulances assumes a large part of all transportation of sick and wounded in the entrenched camp of Paris.

The sanitary train of the American Ambulance has been in constant operation between the front and the interior of France since the beginning of 1916. Composed of thirteen cars, it provides for the accommodation of 264 lying and sitting cases, together with attending surgeons, administrative officers, and orderlies. In its equipment are comprised a complete operating room, sterilizing plant, diet kitchen; in fact, everything for the care and comfort of the wounded. The runs of this train now total over 20,000 miles, and over 10,000 patients have been transported in comfort without a single death!

Beginning in May, 1915, a mobile field hospital of 108 beds was placed in service. In February, 1915, an advanced hospital was established at Juilly-sur-Marne.

On August 31, 1916, the report mentions that on that date 1,485 patients were being treated in Neuilly and the various branches. Up to May 31, 1917, over 8,100 cases of acute surgery had been treated in the Ambulance Hospital of Neuilly alone.

In conclusion may be quoted the following from the last annual report:

"The committee desires again to thank individually every member of the American Ambulance and of its various services. Whether braving death and exposure in the field, passing sleepless nights at the bedsides of the suffering, long hours of strain in the operating rooms, or in the performance of humbler but no less important duties, all have shown courage, steadfastness and devotion worthy of the high ideals of the institution."—Monthly Report of the American Fund for French Wounded.

Executive Offices of the American Hospital Association Move to Washington, D. C.

Dr. William H. Walsh, secretary of the American Hospital Association, announces that the executive offices of the association were removed on October 29 from Philadelphia to 728 Seventeeth street, N. W., Washington, D. C. As is known to practically all members of the association, Dr. Walsh is now in active military service in the office of the surgeon-general of the army.

The
MODERN HOSPITAL

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John A. Hornsby . . . . . Conway Building, Chicago

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Contributors, subscribers, and readers will find important information on advertising page 34.

Standardization of Hospitals

Elsewhere will be found one of the papers read at the meeting, held in Chicago, October 19 and 20, under the auspices of the American College of Surgeons, to discuss the problem of the standardization of American hospitals. Unfortunately, Dr. Hornsby's paper was the only one ready for publication at the time of our going to press. Consequently, any extended account of what was done there must be postponed until the December issue, in which we shall hope to discuss the work of that meeting rather exhaustively and to publish some of the more important papers read before it. We regard this meeting as the most important ever held in this country, having for its object the creation or establishment of some definite standards of hospital service in regard both to architecture and to administration.

It will be noted that Dr. Hornsby in his paper has put the hospital problem frankly upon the medical profession. He states without reservation that the hospital will be just as good as and no better than the medical men who work there, and that the hospital will give service to the sick just in proportion to the demands of its medical men.

This paper was read before a very large and selected group of men and women, many of whom are surgeons working in the hospitals, and the remainder superintendents in charge of hospital administration. As we understand it, the net result of this meeting is the proposal that the country is to be districted by states and subdistricted by counties and cities, and that committees and subcommitties are to be appointed whose duty it will be to obtain data upon which the actual work of standardization may be built.

It is certain that Mr. Bowman, director of the American College of Surgeons, is going about the matter of standardization in the right way. At this meeting, held in Chicago, he arranged his program for the discussion of three phases:

1. What is the hospital problem of today and what are the hospitals actually doing for the sick?
2. What has medical science a right to expect of the hospitals that they are not now doing?
3. How are these results to be attained?

For several years attempts have been made by committees from the American Medical Association and the American Hospital Association to get hold of the problem of standardization in some concrete, effective way; there were obstacles to be overcome and an immense amount of data was necessary before we could know what we are doing now and what it was necessary to do and how to go about it. It seems that most of the preliminary work has now been done and that the greatest obstacles have been removed. The cardinals of the Catholic church have come strongly to the support of the classification and standardization, and the Catholic hospitals have shown not only willingness, but eagerness, to participate. Public hospitals, state, county, and municipal, which for a long time, because of political influence, have looked coldly upon the proposed standardization, now seem to realize that if definite progress is to be made in hospital service this work of standardization is highly necessary and they seem ready to participate. Private hospitals owned by one or a group of medical men, who have not been disposed to permit the necessary publicity and investigation, seem to have almost about-faced and are ready to help.

The American College of Surgeons has appropriated funds to do this work, and it looks very much now as though we were on the threshold of some very radical progress. Apparently the hospital problem is approaching a new epoch, and soon the whole hospital field will be on a new plane measurable by definite comparable standards. Certainly this is very much to be desired.

Hospital Finances and the War

The average hospital has a hard time financing itself, and especially has the American hospital had difficult financial problems to solve since the European war broke out; now, it seems, a new fac-

tor, which promises to make these problems extremely grave and critical has entered into the problem. With the advent of our own country into the war and the necessary diversion of untold millions, even billions, in money for war purposes, have come also financial drains on individuals; the Liberty loans have justly called for the extreme in patriotism from our people; the Red Cross appeal for its hundred millions could not be ignored, and a wonderful response has been made to it. In a smaller way other necessities have arisen, such as the equipment of various army and navy units, the creation of base hospital ambulance companies and various other agencies to help in the war. All of these appeals for money have not only a sane business side, but a sentimental one as well. They appeal to the very highest virtues of individuals and states; the call upon patriotism is probably the most insistent call that can be made, because coupled with patriotism we have humanitarianism and charity and all the other highest virtues in their best expression. In fact, the war fever is on us; some of us will go to fight, others of us must stay at home and furnish the sinews of war, but every patriotic American is wrought up to the intensest pitch of his or her being, and we are pouring out all we have in lives and material resources to do the obviously most important thing now facing us, namely, win the war.

But the necessities of our civilian hospitals are quite as urgent as they ever were, indeed, more so, because of the high cost of everything consumed in them. And yet the appeal of the hospitals is an old appeal. We have had it with us during the lifetime of most of us; we have responded as best we could and as a matter of course.

But how it is to be with the support of the civilian hospitals in this feverish war time? Mr. Oliver H. Bartine, superintendent of the Flower Hospital, New York, who was interviewed by the New York *World* recently, was apparently the first to call attention to the likelihood that the hospitals were to suffer because of the serious diversion of benevolent and charity funds into war channels and away from their usual course.

We must warn the hospital people of this danger. While we have no panacea and no specific cure, we feel that the hospitals must put forth herculean efforts at raising funds, because if there ever was a time when the need of hospitals was great, that time is now. There is no special appeal to be made, except to call the attention of those who have been supporting our civilian hospitals to their continued needs. While it is splendidly patriotic to respond to every call to help in the war, it is equally patriotic, equally benevolent, and equally charitable to see that our own hospitals, built and maintained for our own sick, are not left without resources.

Publicity in the Hospital

Great changes have come over the hospital public within recent years in regard to publicity; indeed, very radical changes in regard to publicity have come over the medical profession, and those changes have reflected themselves in the attitude of the hospitals of the country. A decade or two ago doctors were disposed to call diseases and symptoms by Latin names and they were not disposed to discuss diagnosis or the reasons for treatment with their patients. Hospitals were close corporations, so to speak, and their administrators and trustees resented any attempt on the part of the public to pry into their methods.

All this is now changed. In a paper read before the recent meeting of the American Hospital Association, at Cleveland, Mr. Frederick D. Greene, general secretary of the United Hospital Fund, New York, has reflected the new point of view in regard to publicity in the hospitals. He finds that proper publicity is one of the strongest possible agencies by which to command financial support, and that likewise publicity promises more in the elevation of hospital standards of service than almost any other one thing.

This point of view is now ready to be accepted by the medical profession. Individual physicians are discarding Latin names of diseases, meaningless to the average patient, and are talking to their patients in plain terms about what ails them, the cause of the disease, and the necessary measures to be taken for a cure.

Proper publicity and frankness on the part either of the hospital or of the physician do not mean the divulging of useless or injurious information. In the physician's case it would be positively hurtful for him to tell a hysterical young woman that she was threatened with a disease likely to be permanent or fatal; that would only aggravate the trouble. Frankness on the part of the physician in many other situations, however, can become one of the strongest possible aids to a cure of the disease. A man of forty, who has dissipated either in work or pleasure, should be frankly told what he is doing to himself and how far he has succeeded in hurting his constitution. The boy just on the threshold of adolescence can often be saved from the dangers of young manhood if the family physician or the doctor in whom he seeks to confide will frankly put the matter before him and point the way to safety.

In the hospital, publicity is of another sort; it contemplates the giving out of news of the insti-

tutions for magazines and the daily newspapers, more especially the local papers. It is not legitimate news that Mrs. Jones, a patient in the hospital, is about to abort, or that Mr. Brown is under treatment for delirium tremens. The position of the hospital in such cases is that of the confidential agent of the patient. It occupies precisely the same position toward the patient that the family doctor occupies, and it has no business to discuss with anyone, even another physician, the private affairs of a patient in the institution.

Oftentimes the local newspapers feel that they have a right to know all about the private affairs of some patient of prominence in the community and to publish this information. The responsible people in the newspaper management, however, are usually reasonable, and they can be shown that the giving out of such information as this is not possible or proper and will not insist upon it.

The hospitals of a community, however, are or should be health centers of that community, in which all the people have a definite and proper interest, and the local newspapers are eager for information as to what their health centers are doing. They would be glad, for instance, of an opportunity to publish the fact that Mr. Smith has given $500 with which to buy braces and appliances for the crippled children of the hospital; and this story would have added interest if it could be stated that little Willie or tiny Lily, who have become endeared to the hospital family by reason of a long residence there and the pathos of their cases, were now to be fitted with appliances that would permit them to walk about as other children do. That a new x-ray outfit has been donated to the hospital by Colonel Caldwell, a wealthy citizen of the town, is legitimate and good newspaper publicity, and if to the story can be added the fact that the hospital will now be enabled to make diagnoses of tumors and diseases of the soft tissues that could not be done before, this, with some comment perhaps on just what this means to the sick, would make excellent and profitable reading and would be likely to encourage others to ask the administrators of the hospital whether they, too, might not be of some service by making a donation for some special purpose.

We think that the public of this country in almost any community has now arrived at such a stage of enlightenment and education that it would be proper and a good stroke of business to let it be publicly known when there is an epidemic of any kind in the hospital. Only recently one of the state hospitals for nervous and mental diseases in the central west had a serious epidemic of diphtheria. Visitors were refused admission, tradesmen coming to deliver goods were kept away from the premises, and an air of mystery was thrown around the institution that set the whole community agog. After the epidemic was over, when it became known that a serious epidemic of diphtheria had been there, there was serious and just criticism of the administration, and the community lost confidence in the frankness and fairness of the administration to an extent that is going to hurt far into the future. If the administration had frankly stated that there was an epidemic of diphtheria which was being handled vigorously, and that among other precautions to stop it was the exclusion of visitors, the community would have appreciated the attitude and would have commended the institution's management for carefulness and discretion.

These are some of the thoughts on publicity brought up by Mr. Greene's paper that it seems to us the hospital people ought to be deeply concerned about.

Hospital Needs of the Small Community

Since the publication of our series of papers on "The Small Community Hospital," a great many inquiries have come to the editorial office about proposed small hospitals in various communities, and we have been asked many times to suggest the proper size, the desirable architecture, and the proper organization of small community hospitals. So many of these letters have come in that it is impossible to answer them all in our Queries and Answers column, and it is equally impossible for us to reply adequately to many of these letters privately without going exhaustively into the subject. These small hospitals are so universally coming to the forefront in this hospital era that it might be well to lay down a few thoughts that will help interested people in these small communities to survey their own situation.

One of the letters that has recently come in asked us to state what we thought concerning the proper size and arrangement of a hospital in a central western town of about three thousand people, with a considerable rural population adjacent. That was practically all the information we had to go upon. It was not stated whether it was a manufacturing or just an average American town with small enterprises, no large pay rolls, and of necessity a community that must be handled strictly as individuals. It was not stated how much money was available, and there was no indication of the character or cause of the prevailing diseases of the community. Whether there were many chronic diseases like malaria seems not to have been thought of by the inquirer; whether there was any hospital in the town was not stated

in the letter of inquiry, nor how far away the next hospital was.

All these things have an important bearing and must be taken into consideration in solving the problem as to the community's needs in regard to the small hospital, and the state of the public mind in regard to hospitals ought to be known and reckoned with. In a small community in which there has never been a hospital, the people usually are rather of the opinion that such an institution is not needed, or that the community is too small to afford a hospital, or that the hospital in another town, twenty miles away, at the end of poor transportation, is quite sufficient. Where this mental attitude exists, there must be a period of education, and the best agency for this is the daily papers and the various societies in the town.

Somebody who knows something about hospitals ought to be brought into the community to study the problem for a day or two, and the community ought to have a public meeting at the end of this study, before which the surveyor could talk to the people and tell them what he thought they needed and why. If there is a real need, the results of such a meeting will spread like wildfire, and the whole attitude of the population is likely to be changed in even a few weeks, especially if the person who has made the survey can give some definite figures that the people can study.

In thinking about a hospital for a small community in which there has not been a hospital, this fundamental principle ought to be laid down: that it is far better to build a ten-bed hospital with administrative space to take care of additions, and that the patients of this small hospital should be thoroughly well cared for according to the lights of medical science, than that a hospital of five times the size should be built that would lay a tax burden on the public. A small hospital of ten beds, in which the people would be well taken care of by the best men in the community, would soon prove to the people the need of such an institution, and more money for additional units would be easier to get than the original fund for the first unit. The point is to do a little and do it well rather than try to do much with equivocal success.

Methods to Insure Economy

We publish in this issue a paper by Dr. Moss, of Baltimore, read before the American Hospital Association meeting at Cleveland, and a letter written to THE MODERN HOSPITAL by Dr. H. T. Summersgill, of the University of California Hospital, both dealing with economies in food administration. These men are good hospital administrators and they have studied their problem. They have come to the conclusion that, if really workable economies are to be practiced in the use of food and other consumable commodities, the story of what the institution is doing must be told day by day and in a way that will make one day's consumption comparable with that of another.

Dr. Summersgill did not attend the American Hospital Association meeting and did know that the subject was coming up in the form of a paper by Dr. Moss. Dr. Moss had no knowledge concerning what Dr. Summersgill was trying to do in the way of a daily accounting system of commodities consumed. The two administrators seem, however, to have struck upon the same method of approach to that problem, viz., a daily accounting system. We are not altogether convinced or entirely satisfied as to the details of the plan suggested by either Dr. Summersgill or Dr. Moss, but we are quite certain that some modification of their plans that will elicit a little clearer information on daily consumption is the best method by which to measure what the institution is doing for the purpose of practicing greater economies. We very strongly recommend to hospital people that they read and study these two papers with a view to utilizing the suggestions they contain.

Generosity Mobilized for War

A little incident occurred recently that demonstrated, to our mind, how the people of this country, in every walk of life, are mobilizing themselves to win this war with the least possible sacrifice and with the largest possible amount of good feeling.

A doctor in one of our large cities, a man of thirty-five, who had already achieved a medical practice amounting to ten or twelve thousand dollars a year, was ordered to the front as a first lieutenant with the small pay of that rank. The wife of the doctor had set her teeth and prepared to make all the necessary sacrifices to live on the small income her husband would have and to take care of her rather large family of growing children. After the doctor had gone, another doctor in the neighborhood, a man on whom the lieutenant could have no possible claims, made the offer that he would take over the entire practice of the absent one, make the regular charges for service, and turn over all the fees earned from this practice to the wife left at home. That arrangement is now in full swing, the wife has an excellent income, and the absent doctor's practice is being nursed and cared for against his return.

If this war did nothing else than develop such high ideals and such generosity in the American people it will be worth all it has cost.

MUNICIPAL TRAINING SCHOOLS FOR NURSES*

With Special Reference to the Organization and Work of The St. Louis Municipal Nurses' Board

BY CLEVELAND H. SHUTT, M. D., Hospital Commissioner of the City of St. Louis.

The various municipal hospitals have had more or less trouble, sometimes of a serious nature, at irregular intervals, in the maintenance of proper training schools for nurses or in obtaining satisfactory nurses.

The nursing supply has usually been from one of two sources, either from a private training school or direct from a training school conducted by the management of the hospital. The most serious difficulty has been that of maintaining proper standards whereby pupil nurses with satisfactory requirements as to intelligence, preliminary education, etc., could be attracted and retained.

The St. Louis City Hospital, an institution with over 850 beds, for nearly thirty years was supplied in a most satisfactory way with nurses from a private training school—the first one west of the Mississippi River—which was known as the St. Louis Training School for Nurses. This school was organized and conducted by a group of public-spirited women, and the city paid so much per nurse to this school. The board finally decided to discontinue its work because of inability to obtain a sufficient number of younger members, etc., and it became necessary for the hospital authorities to devise ways and means for a continued supply of high-grade nurses.

To overcome the difficulties furnished by indiscriminate recommendations for pupil nurses with varying qualifications, it was thought that it might be wise to vest the power in the hands of a fair-sized board. Accordingly, the St. Louis Municipal Nurses' Board was created by ordinance, approved by his honor, the mayor, June 2, 1915. This board was authorized to make rules and regulations, subject to the approval of the hospital commissioner, for the conduct of the City Hospital Training School for nurses, the nursing department of the Isolation Hospital, the nursing department of the tuberculosis hospital, and the visiting nurses.

In organizing the board it was planned to retain the services of experienced members as long as possible. It consists of seven members, three of whom must be women and one member a physician, appointed for terms, determined by lot, of from one to seven years, with all new appointments for a period of seven years.

The board, in the first two years of its operation, has established a municipal training school at the City Hospital and special training schools for the isolation and tuberculosis hospitals, and has also organized and placed in most satisfactory operation a visiting nurse department for the care of tuberculosis and baby welfare work. The scope of the visiting nurse work can be enlarged whenever it is found advisable.

The City Hospital Training School has been placed on a three-year basis, with entrance requirement of one year in high school. The board is required by ordinance to maintain admission and graduation requirements to conform to those established from time to time by the State Board for Registration of Nurses, but already has established more advanced standards than are required for registration. Pupil nurses receive lectures from the teaching staff of the training school, from the visiting and resident medical staffs, from the resident dietitian, from the head social service worker, and also from the head visiting nurse. They have opportunities for working in the visiting nurse department for a period of from three to six months during their course of training and also to spend from one to two months at the Isolation Hospital.

A training school has been organized for the Isolation Hospital, with graduate nurses as superintendent and supervisors. Practical nurses, who are of good moral character and have had not less than an eighth-grade education, are utilized for training purposes at a salary of $25 per month the first year and an increase of $5 per month each year thereafter for five years, at the end of which time a practical nurse certificate is given them. Pupil nurses from the City Hospital also receive training here, and a certain number of pupil nurses from private hospitals are admitted, when the number of patients will admit. The practical nurse training in this institution seems to have solved in a very satisfactory manner the nursing difficulties which were constantly present in our contagious disease hospital.

The Tuberculosis Hospital Training School has also been organized with a graduate nurse as superintendent and graduate nurses in the more important supervisory positions, and practical nurses in training, and the plan has thus far worked with satisfaction. We believe that the plan of training practical nurses under graduate nurse supervision in such special institutions as a tuberculosis or isolation hospital will furnish the ultimate solution of the nursing problem for such institutions.

The visiting nurse department has been organized with a specially trained head visiting nurse and sixteen graduate, registered nurses to cover the entire city in the matter of tuberculosis cases and baby welfare feeding clinics; eleven nurses are assigned to the tuberculosis work and five to the baby welfare department.

The board has thus far been able not only to place in operation and maintain the three training schools of separate character and to organize an entirely new visiting nurse department in a satisfactory manner to the hospitals, the medical profession, and the people, but also constantly to elevate the standards of work in the several departments.

It must be admitted that the membership of the board was carefully chosen as far as possible from experienced persons. The three ladies on the board were selected from the old St. Louis Training School Board; two members were chosen from a former hospital board; the physician was a full-time university pediatrician with no outside practice, and the remaining member is a member of the legal fraternity, who has given a great deal of attention to charitable work. The board membership, therefore, had an experienced viewpoint from the beginning and has been able to cooperate with the several institutions and departments of the city government, as well as to keep the entrance requirements for pupil nurses on such a basis as to attract the most desirable class of nurses and in sufficient numbers.

*Read before the American Hospital Association at its thirty-fifth annual session, Cleveland, O., September 12, 1917.

The cornerstone of a $2,000,000 hospital and medical college being erected in Peking by the Rockefeller Foundation, was laid September 28. Many prominent persons were present, including Fan Yuen-lien, Minister of Education, Dr. Paul Reinsch, the American Minister, and Admiral Austin Knight, commander of the American Asiatic fleet.

The Patton State Hospital, Patton, Cal., is building a home for its nurses.

REPORT OF COMMITTEE ON ACCOUNTING*

Standardization of Work Done, Census, Financial Accounting, Emergency Service, and Dispensary

BY A. R. WARNER, M. D., Cleveland, Chairman; FREDERICK D. GREENE, New York; and MALCOLM T. MacEACHERN, M. D., Vancouver, B. C.

As part of the report of the standing committee on hospital efficiency, the chairman of the present committee on accounting presented a paper at the meeting of this association last year, dealing with the present lack of uniformity in policies as well as in the details of reporting and accounting of work done and of the cost of hospital maintenance. This paper also referred to the failure of all previous attempts to standardize or to unify hospital accounting. An appeal was presented to the association that it again make an attempt to secure the unquestioned value which would necessarily come from a standardization and unification of hospital reports, both financial and statistical, but by very different methods from the previous attempts.

To the paper of last year was appended the following resolution, which was adopted by the association and the present committee appointed under its provisions:

"Resolved, that a special committee of three on hospital accounting be appointed by the president to serve until discharged by the association. This committee shall from time to time propose such recommendations leading to more uniform and comprehensive accounting as it shall deem advisable. The recommendations and reports of this committee shall be considered by the association, and if the recommendations are adopted, an effort to cause their use in hospitals represented in this association should be made by the members of this association representing such hospitals."

The plan suggested in the report at Philadelphia was to attempt to secure the advantages of standardization by the adoption from time to time of standard figures or totals which should be definite in their meaning and computed and understood alike by all hospitals. It was deemed possible to develop the use of many such figures without causing extensive changes in the systems of accounting now used by various hospitals, which necessarily are to a certain extent individual to the various hospitals.

In accordance with these ideas, the committee recommends the standardization of the following terms, facts, and figures, and the inclusion of these terms, facts, and figures in all published reports:

WORK DONE

The first and most important figures to be standardized seem to the committee to be those representing the amount of hospital treatment given in a year and the arrangement of these figures so that the persons supervising organized charity in every community may know that hospital's contribution to charity—to the community. It is recommended that all hospital patients be classified as follows:

1. "Pay." This class to include all patients paying an amount equal to or above the cost of their care. In this class there is no contribution by the hospital to charity.

2. "Part-pay." This class includes all patients paying something for their care, but not full cost. The difference between the sum received from such patients and the cost of their care, as figured from the average per capita diem of the hospital, is the contribution by the hospital to charity in the care of these patients.

3. "Free." This class includes all those who pay nothing whatsoever for their care. The entire cost of providing hospital care for these patients to the extent of the total number of free treatment days is computed directly from the average per capita diem cost. Such a figure represents, therefore, the contribution of the hospital to society in the care of these people.

In each class there should be computed and reported the number of persons receiving care, the number of days of treatment given in each class, and the amount of money received from the patients in each class with corresponding totals representing the entire work of the hospital. The classification of the patient should be transferred as necessary with or without the actual transfer from one bed to another. A patient may enter "pay" and so remain for a time occupying a private room, then on account of failing resources become a "part-pay" patient, and in the end the absence of resources may require that this patient be made entirely "free." On the other hand, a patient may enter "free" and the assistance of a wealthy relative cause transfer the other way. These figures show at a glance the contribution of a hospital to a community and indicate definitely the support which the hospital should receive from the community it serves.

CENSUS

To figure absolutely the days and fractions of a day each patient remains in the hospital and the total hospital days from these figures is both cumbersome and unnecessary. It has become a quite universal custom for each ward in a hospital to send to the office the census report showing patients on the ward at midnight every night. For every person so recorded the hospital credits itself with a hospital day of treatment in the class to which each patient belongs. As few patients arrive at midnight this system is rarely accurate in individual cases, but the average is more accurate than any averaging system yet devised, and for statistical purposes is far more accurate than most of the other figures obtainable. It is recommended that this system be adopted as the standard.

FINANCIAL ACCOUNTING

In the financial accounting the committee does not think it advisable to recommend that more be done at the present time than to urge hospitals to report as accurate a figure as possible representing total hospital maintenance cost. This figure divided by the total days of treatment given to all classes gives as quotient the average per capita diem cost. This is the figure to be used in computing a hospital's contribution to charity, etc. In some hospitals the maintenance cost of the private patient does not differ materially from that of the ward patient. There are many items in common, and the additional expense for the few differing items, as for food, plumbing maintenance, etc., is often balanced fairly well by the decreased nursing care given by the hospital because of private nurses employed by the patient. In some hospitals, private patients may be housed and served in a way to make the expense of their care distinctly different from the average cost of the ward patient. In such cases a separation in accounting is advisable.

To secure a maintenance figure worth while, complete separation of capital from maintenance accounts is necessary and should in all cases be made. In maintenance cost figures should be included all expense items contributing to the care of patients, regardless of the sources of income, whether it be from general or special funds, from personal contributions, or from other sources. The primary object of the published report should be to announce the work for society and the cost to society so that the need for the existence of the institution, the demands made upon it for its aid, the wants and the opportunities for greater serv-

*Read before the American Hospital Association at its nineteenth annual session, Cleveland, O., September 12, 1917.

ice, and the efficiency as well as the effectiveness of its work may be accurately judged. To this end standards for measuring the work done are necessary and the total maintenance cost figure should represent the total cost to the community—to society—not the cost to a certain fund or funds. Perhaps the simplest way to combine special gifts or funds is to pay for the specified items directly from the general maintenance fund and then transfer the income from the special funds or gifts to the maintenance or general account.

EMERGENCY SERVICE

The emergency service of many hospitals is negligible in cost or in amount. In general, emergency patients and all patients who stay less than twenty-four hours, which usually includes tonsillectomy cases, should be kept separate. If the number of emergency or overnight patients cared for by a hospital is considerable, such service must be reported separately, both in volume and cost.

DISPENSARY

The two essential figures in the work of a dispensary to report are: (1) new persons admitted; (2) total visits made. The new persons admitted represent the extension of the dispensary work among the neighborhood people. This figure is different from those figures representing the number who come with a new sickness or complaint, "new cases," or the number of different people attending in a year, etc. The comparison of this figure with the number of total visits made indicates more accurately than any single figure devised the sociologic value, the efficiency of a dispensary. The larger the ratio between the total visits and new persons, the more visits the average patient must have made, thereby reducing the principal defect in efficient dispensary work—the drifting away of the patient. This ratio also indicates the attitude of patients toward the services of a dispensary. If patients are properly treated and they feel that the service of a dispensary is worth while, they will return and keep under the advice of the dispensary physicians. Some patients may really need but one visit, but the proportion of these in dispensaries of like type in various sections of the country is practically constant. An average of more than three or four visits is unquestionably required to treat properly the patients of any general dispensary. The ratio between the total visits to a dispensary and the new persons admitted is approximately this average. It is quite important that the number of visits made to each clinic be known on account of necessary internal adjustments and management, but such figures have not proven of general interest unless used as a basis for calculating the average number of visits made by patients to each clinic. The separation of the visits made by men, women, and children, or residents and non-residents, etc., may at times be interesting, but the general value of additional records does not seem to be established.

The maintenance cost and the average visit cost of the dispensary should not be mixed up with the hospital figures. Many of the items of expense of dispensary maintenance are necessarily separate. The others may be quite accurately estimated and prorated from the common figures, although separation at the source may be impossible, as in the case of expense for heat, light, etc. The only really essential financial figure is the total maintenance cost, and this, divided by the total number of visits, gives the average visit cost, which corresponds directly with the average per capita diem cost to the hospital.

Other special departments of hospital work, such as pay or diagnostic clinics, ambulance service, extension of medical service to the homes, etc., should be treated as a pay pavilion, large emergency service, or general dispensary; i. e., the cost of such service kept separate and not included in the general per capita figure of the hospital or of the ward patient.

The committee realizes that strict accuracy can find many flaws in the above figures, but strict accuracy in such figures is impossible. A hospital cannot spend all its energy keeping books. The above figures, however, do appear to the committee as the best averages and most valuable totals to be standardized and uniformly computed and reported.

It is hoped by the committee that these recommendations will be fully discussed and if adopted will be incorporated in the annual reports of every hospital represented by this association. It is also recommended that this committee not be discharged at this time.

CLINICS AND VISITING NURSING

A Trained Nursing Service to Meet the Needs of the Self-Respecting Middle Class—Range of Fees

BY MARY ELIZABETH HAAG, R. N., Superintendent of the Kokomo Public Health Nurse Association, Kokomo, Ind.

In cities where the clinic and visiting nursing are organized on a pay basis and with the idea of teaching preventive methods of service, much good is accomplished. A class of people whose incomes are up to $2,000 a year and less may be reached. This might not be possible otherwise, as, in this day of specialized medical work, these people are not able to avail themselves of early diagnoses, continued treatment, and operations, which are beyond their reach unless a clinic and trained nurse's service are provided. Nor do we find among this group of self-respecting, self-supporting families many who will borrow or accept charity. These people are able to meet the general expenses of daily life, but when illness brings its often heavy demands, there is no margin for medical aid.

One of the aims of such service is to reach the deserving class. A follow-up system of trained visiting nursing in the home, when the clinic patient needs care, is one source of information for the doctor's history sheet and the investigation necessary to bar abuse of the service. Patients are given to understand, in the first visit to the clinic or in the home, their eligibility for the service. The nurse or social worker on duty at the clinic gets a definite history of the social side as well as the medical of the family, including especially the question of whether they have a family doctor or are under a doctor's care at the same time as they are coming to the clinic, what the income is, the items it must carry, number of dependents in family, health of members. The supervisor of the clinic knows how the budget of a family with a given income is expended.

The staff of physicians has regular days and hours of service scheduled, usually hours for surgical work daily, medical three hours per week, two babies' and children's clinics, two clinics for prenatal and post-natal service. With a sufficiently large staff and assistant staff men, they can be depended upon to attend their clinics regularly. A doctor, supervising nurse, and assistant nurses to carry the work well are on hand. Patients are requested to report before the doctor's arrival to prepare history sheets, have dressings ready, and eliminate those who do not need the doctor's attention, for instance, those who are to have minor dressings, and those cases in which directions for the nurses enable patients to be cared for between their report days.

Patients are directed to the physician in whose care they are for continued service, unless treatment or advice is needed between clinics. In this way the interest of doctor and patient is established. The patient naturally feels the doctor is interested, especially if prolonged and painful treatment is necessary, or serious surgical work. The doctor has the satisfaction of seeing the patient throughout this time necessary for cure.

Another bond we find of good use in the success of our work is the visiting in the homes by the staff doctors, when the patient is too ill to report at the clinic. The nursing and teaching in the homes of patients, by the trained nurse probably helps to lessen the high sick rate and death rate. Throughout all the plans for the clinic and nursing service is the preventive idea, enabling the people to come to the clinic when early symptoms of disease manifest themselves, securing prompt advice and treatment; and we know that a great deal is accomplished which otherwise would not be possible.

As to fees, they are arranged on a scale of from 10 to 50 cents per visit. Sometimes the patient is able and willing to pay part of a fee for the doctor's service as well as the dressing or treatment needed. The fees are used toward the expense of the clinic. The arrangement for the nurse's service in the homes is the same. Some months the expenses of the clinic are fairly well covered. The plan is not by any means a money-making scheme or one to replace the family physician or the visit to the doctor's office, but a very necessary medium for a service found wise, time-saving, and health-saving, and within the reach of a class of people who are very deserving and of value to a community.

There are, of course, many who cannot pay, or sometimes pay a little, and most often have no funds. A very necessary work is included in the service for them, helping them to a recovery that means self-support, and lessening the relief burden the communities carry, often through their ignorance and lack of advantages, by aiding them to secure reliable medical service, which might not otherwise be possible for them.

Increasing figures of disease and death rates are lessened by comparison when such a service is established. When people with means can be made to realize what a clinic and visiting nurses' service means for their city or town, the funds are usually available. We know that the United States spends hundreds of millions a year for physical degeneracy and disability, and preventable disease. Hospitals, schools, visiting nurse organizations, or groups of interested people of means, can establish clinics of this kind. As a start, a waiting room, a consultation-treatment room, and another room for recovery or private treatment are all that are necessary. Two separate entrances are desirable, so that the patient need not go out through the room by which he enters.

Meeting of West Virginia State Hospital Association

Because all of the hospital executives are busy persons, it was decided to hold the hospital meeting at Fairmont, W. Va., the day before the state medical meeting, that is, October 1, and to concentrate in one short business session in the afternoon. Accordingly the address by the president, Dr. W. A. McMillan, of Charleston, outlining the things for which the hospitals of the state must stand, and Miss Edna Brown's paper on "Training of Our Future Nurses," were the only addresses presented.

The association authorized the appointment of a special committee to represent the association in seeking an advance of compensation case rates to be allowed hospitals.

Each senator and representative was also addressed in a special appeal, requesting their assistance in preventing the taxing of alcohol by the present session of Congress.

Officers for the coming year were elected as follows: Dr. W. A. McMillan, president; Dr. B. B. Wheeler, first vice-president; Dr. J. A. Guthrie, second vice-president; Dr. R. E. Vickers, third vice-president; Mr. Pliny O. Clark, secretary and treasurer.

Land Transportation in the British Naval Medical Service

The medical department of the British navy has created a special land transport organization for the removal of the wounded from the points at which they may be landed. Surgeon-General Sir James Porter and Staff Surgeon A. Vavasour Elder describe this phase of the work in the *British Medical Journal*. The organization includes a central office at the admiralty, medical transport officers at the chief naval ports, and assistant medical transport officers at all places round the coast where wounded are likely to be landed after action. One of the difficulties of the problem is the impossibility of foretelling just where and in what numbers wounded will be landed. In order that no place which is likely to receive wounded may be left without means of rendering medical aid, emergency medical depots in charge of medical transport officers have been established at various places along the coasts.

From the time a wounded man is landed from a ship until he is placed in hospital, he is in charge of the land medical transport. When a man is wounded severely enough to require immediate treatment in bed, after having received medical attention, he is placed in his cot, in which he travels all the way from the fighting ship to the hospital.

All the ambulance trains, motor ambulances, bearer-parties, etc., have been specially organized in a standard and uniform manner with regard to each link in the transport chain—thus, the patient and his cot with bed and bedding are landed from the ship and turned over to bearers specially trained in the handling of cots, who carry the cot to the ambulance or ambulance train, as the case may be, and load it. In exchange for the "loaded cot" the ambulance or ambulance train gives a clean, empty, and fully equipped standard cot for return to the ship from which the patient was received. In this manner the fighting ship always maintains her complement of clean cots.

When an ambulance or train is filled it moves off to its destination, and on arrival, the same exchange of cots is made as before, and so on throughout each link until the patient is finally taken out of his original cot and put in bed in hospital. By this method there is a constant outgoing stream of clean cots from the base to the ships at sea all ready for further service. Everything connected with the land transport of wounded is maintained in a state of immediate readiness, and finally, and most important of all, the wounded themselves are spared the sufferings caused by repeated transfers from ambulance stretcher to ambulance train and back again to another ambulance stretcher, etc. Also the time taken thus to empty an ambulance train is very brief, and the delay to ordinary passenger traffic practically nil. At the large naval bases arrangements exist for the cleaning of all cots and bedding, and a store of clean cots for exchange purposes is also established.

INDUSTRIAL TRAINING FOR THE FEEBLE-MINDED

Excellent Work and Wide Variety of Tasks Accomplished Under Skilled Guidance by Feeble-Minded Workers

It has been observed that during the past decade there has been a great change in the proportion of types of the feeble-minded coming to asylums. Ten years ago four-fifths were idiots and imbeciles and only one-fifth border-line cases and morons. Today the proportions are reversed; there are four morons and border-line cases to one imbecile or idiot. Dr. Charles Bernstein, whose interesting work at the Rome State Custodial Asylum, Rome, N. Y., is described in the July issue of this journal, suggests that this is due to industrial changes. Modern industry sifts candidates for employment through an ever finer sieve. A man who in former days and under simpler conditions might have been self-sustaining even though not conspicuously successful is today decisively rejected as not up to the standard required for employment. So long as he was self-supporting he might have passed for normal, though dull, but, coming under scrutiny as a dependent, he is quickly found to be a defective.

Society, therefore, must have an ever heavier burden to bear unless it can find some way of utilizing the labor of these rejected ones. Fortunately, it is now realized that these grown-up children have industrial capabilities, and can attain happiness and self-expression only through the employment of such abilities as they have. They are incapable of self-direction, but under competent and kindly guidance they may reach what is, for them, full measure

Fig. 1. Some of the [illegible] at the State Institution for the Feeble-Minded of Western Pennsylvania.

of usefulness and happiness, and become less of a burden to the state.

The accompanying illustrations show some of the industrial classes in the State Institution for the Feeble-Minded of Western Pennsylvania, Polk, Pa., and the New Jersey State Institution for Feeble-Minded, Vineland, N. J., and some of the work accomplished in those classes. The high

taught little from books. Many of these children under direction are self-supporting. Appropriate work and play bring happiness and contentment in the institution for the feeble-minded. Appropriate employment is a most remedial employment, and properly systematized is of great economic value."

Many of those who have passed through the school

Fig. 2. The women and girls in the State Institution for the Feeble-Minded of Western Pennsylvania have their share in the industrial life of the place.

grade of the products will probably be surprising to many who do not realize the industrial capabilities in the feeble-minded. Dr. J. M. Murdoch, superintendent of the State Institution for Feeble-Minded of Western Pennsylvania, says:

"Many of the children who do the most exquisite arts and craft work are unable to read and write, and can be

training but who are not able to get along in the outside world are profitably employed in a great variety of useful activities. The men and boys in the State Institution for the Feeble-Minded of Western Pennsylvania aid in the tilling of the soil on a farm of six hundred acres, and raise farm and garden produce for the twenty-three hundred members of the community. Much of the farm has

been cleared and roads over the farm have been built by these boys and men. Making concrete walks, culverts, and fence posts and caring for cattle, hogs, and poultry are also among their tasks. Those who, because of physical deformity or lack of physical vigor, are incapable of working on the farm, while others, during the winter months, are engaged in weaving carpets and rugs and making mattresses, clothing, shoes, brooms, brushes, and furniture. Fig. 1 shows some of the men and boys of the institution thus engaged in tailoring, leatherwork, shoemaking, and the making of baskets and hammocks.

The women and girls make dresses, baskets, stockings, embroidery, a very fine grade of cluny lace, and woven tapestry. They are usefully employed also in the laundry and the kitchen, in the preserving of fruits and vegetables, and in various other branches of housework. Fig. 2 shows some of the special activities of the girls and women.

Fig. 3 illustrates some of the products made in these classes. All of these articles, it must be remembered, were made by feeble-minded children. The mental age of the great majority was either 8 or 9 years.

Interesting work in the same direction is being done also at the New Jersey State Institution for the Feeble-Minded, Vineland, N. J., under the direction of Dr. Madeleine A. Hallowell. There the motto is "Every patient should be trained to the highest limit of his capabilities." The children are examined on admission and graded according to the facts discovered. They pass through Montessori classes, and those who are capable of receiving such training are grounded in the three Rs. Hammock weaving, rag

Fig. 3. Some of the beautiful articles produced by feeble-minded children in the State Institution for the Feeble-Minded of Western Pennsylvania.

carpet weaving (Fig. 4), Navajo rug weaving, trade sewing (Fig. 5), embroidery, and basketry are some of the practical crafts that are taught in the industrial classes in these institutions.

The pupils also do the domestic work of the institution. The class of work is carefully selected to suit the type of individual. Imbeciles make excellent laundresses, and in the New Jersey State Institution the imbeciles are employed almost wholly in this line of work. The washing, mangling, ironing, yard work, and linen room work is done by imbeciles under the supervision of one trained employee with two high-grade assistants. Imbeciles and morons are employed also in the kitchen, the bakery, the butcher shop, and the dining rooms.

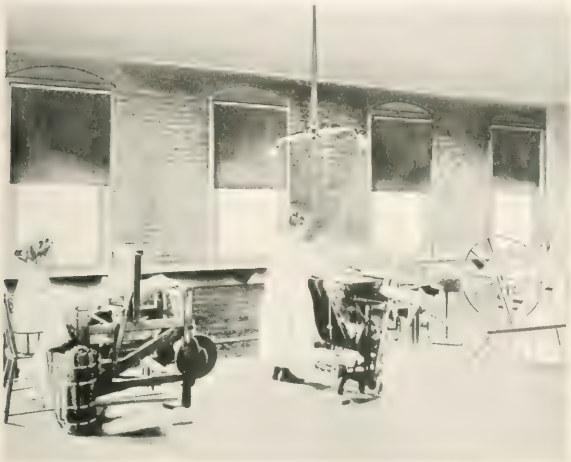

Fig. 4. Weaving rag carpets in the New Jersey State Institution for Feeble-Minded, Vineland, N. J.

A modern dairy, which provides sanitary and adequate accommodation for thirty cows and twenty calves, with feed room, milk room, two silos, storage barn, and stable, is also operated entirely by patients under the supervision of a specially trained woman. This class of work is said to be specially adapted to the defective delinquent type of patient. It satisfies their desire for self-expression and their need for something to love and care for. Milkmaids attend to the milking, dressed in their sanitary uniforms. A friendly rivalry exists among them for the record milk yield of their respective pets. The patients work here from 5 a. m. until 6 a. m., breakfast time. They return at 6:40 and work until 8:30. At 8:45 they return to their classes, which continue until 11:30. This gives them time to feed the animals before the dairymaids have their own dinner. After a rest period, a portion of which follows the dinner, the patients return either to other agricultural work or to study. No one line of work is allowed to occupy any given patient's entire daily program. A certain number of hours' work of a suitable character is interspersed with study or diversion of various character.

The raising of pork for the use of the community is a profitable industry for the institution. It is also an occupation highly prized by the patients. The scrupulous standard of cleanliness maintained perhaps does much to render the work attractive.

One hundred and forty-nine acres of land are devoted largely to trucking and other agricultural industries on as intensive a scale as possible. The growing of the small fruits and vegetables necessary for the use of the institution requires, during the summer, the efforts of all the patients that can be spared from the other industries. The harvest is large, both in produce and in invigorated constitutions. Every grade of feeble-minded except the very lowest can have a share in this work. White and sweet potatoes, sweet corn and field corn, tomatoes, string and lima beans, onions, cucumbers, cabbage, celery, peas, turnips, squash, pumpkins, parsnips, peppers, spinach, radishes, lettuce, cauliflower, eggplant, watermelons, cantaloupes, strawberries, raspberries, blackberries, peaches, pears, cherries, rye, and alfalfa are all grown in great abundance, being cultivated and harvested by the patients under competent instruction from attendants. Patients husk corn in the fields. In the same way the woods are cleared of their undergrowth and the grounds of refuse under the respective captains of the various clubs.

There seems to be no limit to the accomplishment of patients under proper supervision. Digging trenches and cellars and concreting foundations and sidewalks are tasks just as interesting to the type suited to this class of industry as trade sewing, mending, and housekeeping are adapted to another type.

Fig. 5. Feeble-minded women and girls in the New Jersey State Institution for Feeble-Minded doing trade sewing.

"Much sentimental and ill-directed sympathy," says Dr. Hallowell, "is felt for what are commonly considered to be 'these poor incarcerated individuals.' No greater fallacy was ever given voice, as their happiness is found in the performance of duty and participation in pleasure."

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH,
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

The Teaching of Bacteriology in Schools for Nurses

BY BLANCHE PFEFFERKORN, B. S., R. N., Instructor, School of Nursing and Health, University of Cincinnati.

In the quickening of the nurse training school movement during the past decade, the entire body of knowledge comprising the education of the nurse has undergone a searching and critical examination, both as to validity of content and as to pedagogical legitimacy of method. A critical attitude is a promising sign, particularly when turned into constructive channels. It not only stimulates retrospective analysis, but arouses introspection as well, and frequently gives rise to perspective, all of which are necessary and inevitable elements in the evolutionary process. Indeed, it seems to be one of Nature's laws that any great economic, political, social, or educational change be preceded by looking backward, looking inward, and looking forward.

Such a self-analysis is stirring the training school. It is finding expression in various directions, but up to the present time the curriculum has been the chief point of attack. Educators in the nursing world are realizing and facing the fact that, until readjustments are made in the course of instruction of a nature to give it merit to rank among other educational systems, nursing education will not be recognized by colleges and universities. Old forms, old traditions that no longer meet living issues must be abolished if the much-desired articulation between training school and university is to be accomplished.

Not one particular part, but the entire program, is undergoing this survey of inquiry. Bacteriology, in common with other subjects, is coming in for its share of the searchlight. In the case of bacteriology, the facts disclosed are more or less exhausted by the following statements. Bacteriology, a science subject, is given in a prescribed set of lectures, the number varying with different schools. Occasionally demonstrations are added; in rare instances a well-equipped laboratory is accessible. These methods are futile. Honesty will compel those of us whose instruction was of this character to admit that though we went through the bacteriology course, the bacteriology rarely went through us. At the end of the term the limitation of our knowledge of the subject and its application to public health problems was its most conspicuous feature.

It is far from my intention to decry the past. That would indeed be disloyalty to a loyal cause. Rather would I wish to emulate those of our forbears whose keen insight into the needs of a nurse and whose appreciation of her work in the community first added bacteriology to the training school curriculum. It is a rich legacy, and one which, if rightly used and carried forward, should multiply and prosper. So many difficulties have accompanied the development of training schools, it is small wonder that the introduction of scientific instruction with the complementing facilities have had to yield to more immediately pressing issues. Moreover, at the present time, a study and modification of the curriculum is not peculiar to the school of nursing. It is part of a general movement experienced by primary and secondary schools and colleges throughout the country, and can only be regarded as one of the manifestations of a changed social system with changed social needs.

A discussion of the teaching of any subject involves certain considerations. First and perhaps most important: What is the purpose of the course? How is it going to contribute to the mental horizon of the student and the welfare of the community? Concretely, Will the nurse be a more efficient nurse because she has studied bacteriology?

A brief survey of the medical and nursing situation will answer this question.

The phenomenal development of the science of bacteriology in the past fifty years has greatly multiplied the possibilities of medicine, not only curative, but, what is even more important, preventive. The discovery that a large share of the ills of the human race are due to a particular micro-organism, just as much a part of the great biological kingdom as man himself, has revolutionized the practice of medicine. As nursing is, or should be, the intelligent agent of medicine, the sequence has been what might be expected, an equally profound reaction in the practice of nursing. The public health nurse, serving in the capacity of educator, sanitarian, inspector, and what not, is the chief manifestation of this development. She, along with the physician, is applying the principles worked out by the great Pasteur, Koch, and others, in order that the world may be a more decent, cleanly place in which to live and the human race enjoy breadth as well as length of life. Unless she be given the proper tools she cannot become the master of her art. An understanding of the fundamental principles and application of bacteriology is one of the strongest weapons with which a nurse can be armed.

So much for the purpose and need of bacteriology in the education of the nurse. The next points to be considered are: When shall it be given? What subject-matter shall be included? How shall it be taught, and how many hours are requisite for adequate instruction? There seems to be a difference of opinion as to its logical place in the program. In the past, it has commonly been given in the preliminary course, but experiment indicates the wisdom of a later period, some time in the second year. Since bacteriology is one of the biological sciences, the pedagogical principle of proceeding from the known to the unknown might better be employed, if the student had first mastered the structure and function of higher organisms before approaching the study of micro-organisms. In addition to anatomy and physiology, chemistry should precede bacteriology. How can the process of fermentation and various other phenomena be explained without a background of simple chemical facts? Then, too, will not an impetus be given to the study of bacteria if the student has seen the clinical picture resulting from bacterial invasion? Perhaps the objection will be raised that it is unsafe for the student, the patient, and the community to delay bacteriology until the second year. In so far as the objection is just, it is met by the introduction in the preliminary term of an elementary course of fifteen lectures

in bacteriology, public and personal hygiene. The more advanced presentation is given after the class has compassed the preparation stated above. Otherwise the student has a subject imposed upon her during a period when she does not feel its need, and later, when its application becomes a potent factor in her work, much that she has learned is vague and indefinite, or the subject is presented to her at a time when its value can be measured in terms of daily experience. Psychologically, either the first or second term of the second year would seem the more desirable period.

In the selection of subject-matter it is well to keep in mind the motive in teaching bacteriology to nurses. Bacteriology belongs to that group of subjects, educationally listed under applied sciences, which, stripped of pedagogical terminology, simply implies that the value of bacteriology lies not in the knowing, but in the application of the known. As a matter of fact, the practice of the principles of bacteriology by the nurse dates from her very first lesson in damp dusting. All subsequent training in scrubbing, in disinfection, in sterilization, in acquiring an appreciation of the meaning of laboratory tests, is merely a continuation of the first lesson. It is obvious, then, that the value of bacteriology to the nurse lies not in an elaborate laboratory technic, not in the part bacteria play in economic production and agriculture, but in an intelligent, workable understanding of the principles underlying the prevention and control of transmissible disease, immunity, sanitation—in toto, "personal and public hygiene." Right here it might be asked if, since bacteriology gives the reason why, and hygiene gives the act, it would not be advisable to call the course "bacteriology and hygiene," rather than bacteriology, and so associate in the mind of the student from the very beginning the organic relationship between the theory and practice.

A perfectly clear idea having been reached as to the part bacteriology is to play in the social life of the nurse, the choice of subject-matter becomes a comparatively easy task. The following topical outline is offered as a suggestion. It claims no special originality, and is not unsimilar to outlines given in many other schools. The value of the scheme depends on the careful working out of its details and the tying up of newly acquired facts with facts already known and with actual ward work.

BACTERIOLOGY

Topic I. Theories of Disease. The rise and influence of bacteriology. Its relation to preventive medicine and hygiene.
Topic II. Biology. Main divisions. Definitions.
Topic III. Green plants. Structure. Biological functions. Economic Aspects.
Topic IV. Molds. Structure. Biological functions. Economic aspects.
Topic V. Yeast. Structure. Biological functions. Economic aspects.
Topic VI. Bacteria. Structure. Biological functions. Economic aspects.
Topic VII. Vital phenomena exhibited by bacteria.
Topic VIII. Conditions affecting the life and growth of bacteria.
Topic IX. Disinfectants and disinfection.
Topic X. Bacteria in the air and soil.
Topic XI. Bacteria in water, milk, and food.
Topic XII. Economic phases of bacterial action.
Topic XIII. Bacteria and disease in animal organisms. Immunity.
Topic XIV. Protozoa, insects, and disease.
Topic XV. Principles of bacteriology applied to prevention and treatment of communicable diseases.

A word to support the selection of this content, and the method of presentation which follows. The significance of Topic 1 is obvious. It will be observed that Topics 2, 3, 4, and 5 deal with higher organisms of the biological phyla. In covering this part of the outline, the instructor either gains or loses much ground. By constantly emphasizing biological science as a whole, and making a gradual descent from animal and plant life which are more familiar to the student to animal and plant life which are unfamiliar, the transition into an unknown world can be imperceptibly made, and bacteria and protozoa, instead of being intangible, indefinite entities, take their place as living, vital factors of the universe. Throughout the course stress should be placed on comparative structure and function, always keeping in the mind of the student the similarity of all life, whether it exists in the great frame of the elephant or in an infinitesimal plant in length 1/25,000 of an inch. The status of micro-organisms in the world of biology having been defined, the physiology and results of bacterial growth and conditions affecting it should next be brought to the attention of the student. This, again, is a topic rich in possibilities. As each condition is cited, the practical application in the technic of nursing should be brought out. For the sake of illustration, take the effect of temperature on the life of bacteria. After the instructor explains the difference between minimum, optimum, and maximum temperature, a class of juniors ought to be bubbling over with examples of nursing procedures embodying this principle. Pasteurization, sterilization, and disinfection by boiling and steam heat are operations that have come within the experience of some, if not of all. If this method be followed throughout the term, the linking of the old with the new, the theory with practice, by the time the student has completed the course in bacteriology a new intellectual vista will have been opened up. Scrubbing the hands before leaving the ward will no longer be a part of hurried mechanical routine, but an important procedure, appreciated as based on scientific principles, involving both personal and public health.

Further interest can be stimulated in the course by readings, papers, and class discussions on the relative contribution of Pasteur, Koch, Lister, and other great workers in the field. Another scheme to induce class activity and liberal use of reference books is the assignment of a report, tabulated in good form, on the cause, mode of entrance, method of transmission, prophylaxis, etc., of a given list of communicable diseases. If time will permit, a study of the history of puerperal sepsis, "hospital gangrene," asepsis, and antisepsis might be profitably taken up. Charts are valuable for illustration, which show the morphology and methods of reproduction of molds, yeasts, and bacteria, and which graphically represent statistics on the relation of the incidence of various transmissible diseases to water supply, to sanitation, and to the use of biological therapeutics.

Such, in brief, is the subject-matter and method of class-room presentation. The next point to be considered is that of the laboratory demonstrations and laboratory practice. Bacteriology can no more be taught by lectures, recitations, and quizzes than can chemistry, physics, or any other applied science. "Seeing is believing." Being told that a particular micro-organism possesses the power of motility imparts only an abstract fact, but looking through the microscope at a squirming, moving animal fixes it as a real experience. Being told that scrubbing the hands is a safeguard against infection is not convincing, but let the student take a culture of her nails before and after five minutes of brisk scrubbing and study the results, and hard scrubbing takes a new significance. One of the great advantages in the teaching of bacteriology is that

the instructor does not hand over to her class a mass of lifeless facts, but for every principle laid down in the class room there is complemental laboratory work. Nothing need be taken for granted.

The next issue to be considered is the number of hours necessary for the course, and their division between class and laboratory periods. As a general rule, which may require modification at times, each class hour should be followed by a laboratory period of two hours, so that approximately one-third of the time is given to class work and two-thirds to laboratory work. In view of the fact that most schools are giving only from fifteen to twenty hours to this subject, the plea for fifty or sixty hours will probably be regarded as overwhelming. And yet the truth remains that it is not possible to give in less than sixty hours a course in a science subject having either individual or academic value. Moreover, if the time assigned to a subject be determined by its relative importance, such a hypothesis would give bacteriology and hygiene more than sixty hours. Having compasses sixty hours, we next strive to add another thirty hours for the consideration of special phases of bacteriology, sanitation, and public hygiene. Perhaps the time is not yet ready for the complete realization of this scheme, but that it will surely come under the impetus of the public health movement there can be little doubt.

A course including laboratory practice presupposes laboratory facilities. A well-lighted laboratory, containing stainproof tables with cupboards and drawers, electric connections, running water, gas attachments, stools, a small electric incubator, and an autoclave make up the main furnishings. Additional equipment consists of compound microscopes, with high- and low-power and oil immersion lenses, ideally one for each student, where this is not possible, one for every two or three, test tubes and racks, glass slides and cover slips, Petri dishes, Bunsen burners, moist chambers, fermentation tubes, graduated pipettes, forceps, platinum needles, balsam of Peru, oil, stains, and such additional chemicals as may be necessary. There should be sufficient equipment for ten students. A laboratory section exceeding this number cannot be handled satisfactorily by one instructor. As the laboratory of the training school is generally located in close proximity to the hospital and its laboratories, it would seem that sterile supplies might be obtained from this source. Otherwise such material must be purchased from commercial laboratories. Prepared slides can be bought, if desired, but it seems reasonable to suppose that the instructor could secure the required cultures from the hospital bacteriologist and make the necessary slides.

Two points remain for consideration: the use of text and reference books and the choice of instructor. So far most of the textbooks that have been written on bacteriology for nurses have not been very adequate. Instead of giving basic principles, they too often state complex facts, unintelligible to the beginner. If the well-intentioned writer would keep in mind that the same educational principles apply to the compilation of textbooks for student nurses as for other individuals in the process of learning, a greater degree of success might be attained. This very important item seems to have been frequently overlooked. If for no other reason than this, supplementary reading should be selected with great care.

Other factors, however, enter into the question of a text. Bacteriology and hygiene, both products of the past half century, are passing through the evolutionary stage natural to a new science. What is new today is old tomorrow, and it is unsafe to make a prognosis on the findings of the future. The result of this constantly increasing body of knowledge is what might be expected, an overflowing market of literature in book, magazine, and pamphlet form, some highly commendable and some otherwise.

With such a wealth of material, is it not logical to conclude that the use of one lone text on the teaching of bacteriology and hygiene belongs to the past? The present and future call for a variety of standard reference books and magazines, ample in quality and quantity to meet the needs of the group. Given such a library, the advantages are evident. With the advice and guidance of the instructor the student becomes acquainted with and gets the point of view of a number of authors and so acquires a bigger vision and a broader outlook.

The question of who shall teach bacteriology to nurses has been more or less agitated in recent years. In the past this responsibility has been most generously assumed by some one of the medical staff or the hospital pathologist. Today the teaching of bacteriology seems to be gradually passing into the hands of that comparatively new element in nursing schools, the "trained instructor." This transition has its pros and cons. No subject can be successfully taught by a poorly prepared teacher, and the poorly prepared teacher will herself be the first to realize her own limitations. The nurse instructor who undertakes to teach bacteriology should have had a sound training in the principles of bacteriology and laboratory technic. If her preparation has included botany and zoology, so much the better. Given these advantages, the nurse ought to make an ideal teacher. Having passed through the same mill, she appreciates both the present and future needs of her students. The instructor in this subject is indeed entrusted with a rare opportunity. When it is remembered that to her is accorded the task of rousing the "aseptic conscience," of giving an intellectual vista that clarifies and enriches the daily work, of creating an impress intimately bound up with the health of the people, her privilege will better be conceived.

In closing, I feel that objections will be made to the generality of this paper. Abstractions have been offered where concrete facts were desired. I am thoroughly cognizant of this item. I beg to add that, until nursing schools reach some mutual agreement as to time given the course, preparation of students, uniformity of equipment, requisites of teacher, it is not possible to establish a common form of instruction in bacteriology or in any other subject. At best, only principles can be submitted, leaving to each school the working out of its own salvation. In the much overclouded future, when the utopian dream of those holding near and dear nurse education will perhaps have come true, and all schools have all things, a clearer, more definite scheme for the course can be reached, but for the present the task of each school is to utilize to its fullest capacity such material as it may have and strive and hope for the ideal.

"People who are in charge often seem to have pride in feeling that they will be 'missed,' that no one can understand or carry on their arrangements, their system, books, accounts, etc., but themselves. It seems to me that the pride is rather in carrying on a system, in keeping stores, closets, books, accounts, etc., so that anybody can understand and carry them on, so that in case of absence or illness, one can deliver everything up to others and know that all will go on as usual, and that one shall never be missed."—Florence Nightingale, "Notes on Nursing."

THE WAR: ITS HOSPITAL, MEDICAL AND NURSING ASPECTS

THE REHABILITATION OF WOUNDED CANADIAN SOLDIERS*

Work of the Military Hospitals Commission of Canada in Restoring Functions of Injured Soldiers

[Continued from October issue.]

FUNCTIONAL TRAINING

BY EDWARD A. BOTT, Department of Psychology, University of Toronto.

When the announcement was made recently that the trustees of the Massey estate had diverted Hart House, the newest of the University of Toronto group of buildings, to a special work of the Military Hospitals Commission, few realized the importance of the event to the lives of hundreds of Canada's wounded soldiers. There was nothing to convey that the government had here undertaken in behalf of the disabled a work so new and advanced that there is only one laboratory in Canada studying the scientific principle to be applied. Yet such is the case.

A short time ago the executive committee of the Great War Veterans' Association assembled at Ottawa for a conference with government leaders and urged the use in Canada of the Amar apparatus for functional training. They told of the wonderful instances of conquering disabilities achieved in France through the use of the devices and appliances invented by Professor Amar. So little is known even by medical men of functional training that it is not surprising the government officials seen by the veterans were unaware that this very work had already been launched in the Dominion. The Amar apparatus, it is true, is not being used, but the scientific principle on which it was built is being applied by Dr. E. A. Bott, of the University of Toronto's psychological laboratory in the construction of scores of devices which accomplish exactly the same results as Professor Amar's creation.

Just to show what is possible, one of the men who was taken in hand at the university last year was paralyzed from the waist down and walked with two crutches. It took but a few months, working with the Bott apparatus, for this lad to recover the entire use of his limbs. When he left the laboratory he was able to box, wrestle, play football, and perform other feats of athletic prowess with the limbs which a short time before had been helpless.

During the 1916-17 term of the university research work on the subject of functional training was carried on in the psychological laboratory with such successful results upon 16 soldier patients sent from Central Military Convalescent Hospital, College Street, that the Military Hospitals Commission resolved early in the spring to undertake the expansion of the work until as many soldiers as possible might receive its benefits. Fortunately, the Commission had already decided to concentrate its orthopedic work for the whole Dominion at the former Booth Memorial Home, North Toronto. Lieut.-Col. Vincent Massey had observed the work at the university and was impressed, and in behalf of the Massey estate he offered the use of the million-dollar gymnasium and social center building which his family was erecting in Queen's Park for the students.

Commenced before the war, Hart House, as it is called, has progressed in construction but slowly since 1914, as in its uncompleted state it was suitable for the carrying on of various military training operations. The southern half of the building contains a great number of small rooms, and it is these which make the building so admirably suited to the work of reeducation, as it is correctly termed. It is one of the essentials of the work that each patient be treated separately by apparatus designed to meet his special case, under the guidance of an individual worker.

The soldiers who will benefit by this new treatment are, for the most part, those who have a disability which entails the loss of one or more of the scores of mental and physical processes which go to make up the total activities of the normal human being. The surgical treatment necessary for most of the physical disabilities will be given at the orthopedic hospital and the psychological influences necessary to assist in the removal of the disability will be supplied at Hart House.

Curiously enough, this very scientific and little understood treatment sounds very simple to the unlearned when explained by one of the workers. The principle applied is to call on a man's own voluntary initiative to practice the process subject to disability. This process may be a movement of some limb or other part of the body, or it may be a thought process such as the power of attention, memory, or association, etc. Usually some small measure of the process still remains and a task is set, in the doing of which the patient practices to its upper limit the impaired process. Just as when a father teaches his young son to throw, practice enables the boy to throw farther and farther each time, so does the patient improve and in time usually completely overcomes his handicap. It all sounds so easy that one is tempted to exclaim, "Why did somebody not think of that long ago? Anybody could do that." It is forgotten, however, that only those who have made a study of the subject can enumerate and name the various movements of which the right hand, for instance, is capable. The first step, when a patient is assigned to the reeducation class, is to hold a clinic and ascertain how many processes have been impaired, and the next is to measure the degree of impairment. Sensitivity is a good example. If a hand or a foot is numb and rather helpless, it is important to find out exactly how numb it is in some terms which can be expressed and understood.

Did you ever cross your knees and then tap a certain place just below the knee cap and observe how a very slight blow causes your foot to kick? The distance the foot moves is very indicative of the whole nervous tone of the man, and Dr. Bott has an apparatus which measures accurately the kick in order to find out that very condition. Before the knee is tapped a clasp is fastened to the ankle and a horizontal indicator rests against 0° on a large protractor. When the knee is tapped the horizontal bar moves along the scale and the highest number reached is the term in which the man's nervous tone is measured. Experience has shown what is normal and what is abnormal.

*This article has been prepared under the auspices of the Military Hospitals Commission of Canady in response to a request from THE MODERN HOSPITAL. Reprinted from The University of Toronto Monthly, April, 1917.

Having obtained all this information about the patient, the worker is then called upon to prescribe for his case. Very often it is necessary to invent a piece of apparatus which will give the patient the necessary exercise.

The prescription in each case will consist of an exercise which can be performed with the disabled member. The patient will practice the exercise consistently, and, if the treatment is successful, will find it grows easier as time proceeds. Then a little harder one will be set, and the patient will be encouraged to increase the effort day by day until the full process is restored. For instance, if it is a lifting process which is impaired, the original exercise will consist of lifting a weight of which the muscle is capable. When this becomes easy, the weight will be increased, and this graduation will be kept up until the man can lift as much with the formerly disabled member as any normal man could have done. If it is a mental process that is impaired, mental exercises will be set on the same basis. They may be mental arithmetic or tests of memory, association, and so on. In some cases the patient will merely carry on a conversation on some technical subject for half an hour or more in order to practice concentration.

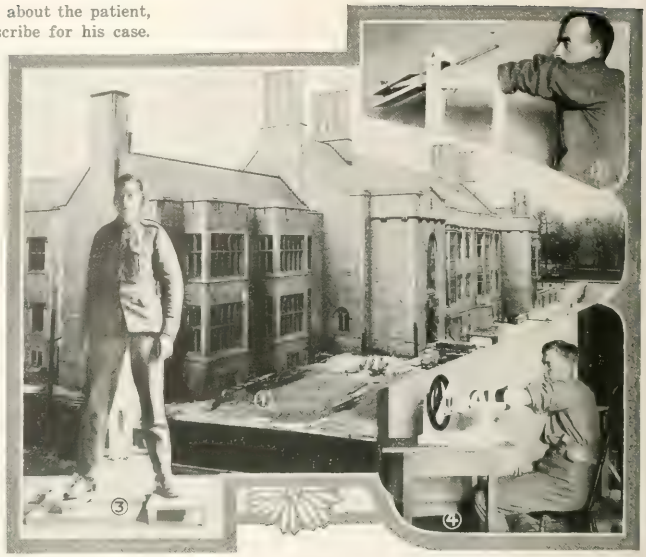

Fig. 1. Reeducation work of the Military Hospitals Commission of Canada; the center picture (1) for the work by the Massey Estate donors; the upper right-hand picture (2) shows a device for wrist flexion, with a protractor on which, by means of the indicator above his wrist, the patient measures the amount of movement he has attained; the figure at the lower left (3) shows a device to aid ankle abduction and adduction, the arc being measured in degrees; the lower right-hand picture (4) shows a device to assist wrist torsion. Some form of meter by which the patient can measure his own progress is a feature of nearly all the devices used by Dr. O. A. Bott, who is in charge of this work.

In certain cases it is expected that volunteer workers will be used. These volunteers will have to be taught the essentials of their art very carefully before they can be entrusted with the welfare of a patient, but as they will require more in the way of natural temperamental adaptability than scientific knowledge, this will not be a serious difficulty. The task of selecting suitable volunteers and rejecting the unsuitable will be one for a born diplomat, but the unaccepted will have the consolation of knowing that they tried to do their bit.

The question of scientific workers is also a very difficult one if the department is to be expanded so as to give any large number of soldiers its benefits. There is known to be a limited number of persons in the Dominion with the technical knowledge necessary to undertake responsible positions in the department, and Dr. Bott is at present engaged in correspondence with most of them in an endeavor to bring them together at Hart House. His staff at present consists of only five or six.

The duty of the volunteer workers will be to encourage the patients to persevere. Mechanical devices of a hundred and one different types are being invented day by day to suit all kinds of cases, and each volunteer will be taught the use of one piece of apparatus. It is regarded as essential that each patient should receive the individual and exclusive attention of one worker, as the main duty of the worker is to keep up the patient's interest and enthusiasm.

One of the great advantages of the Amar apparatus is said to be the fact that a graphic record is kept of the movements made in the practice of the assigned exercise. So far, none of Dr. Bott's devices have had this feature, but each has a scale by which the patient can keep track of his progress in recuperation. The instance already mentioned of the method of measuring a man's kick when you hit him on the knee illustrates how this is done and it is quite easy to prepare a graphic chart by keeping a daily record of the patient's progress.

Every trick of the trade must be used to encourage the soldier to stay with his treatment, for it is the very essence of this work that the man cure himself. It is the voluntary exercise of the disabled function that restores it, and the worker's duty is merely to keep the man at it. Maintaining a lively interest in the scale which measures the movement is a very successful method.

It will be seen that the nature of the volunteers' duties will require the utmost freshness and spontaneity of spirit. It will not do for a tired man or woman to sit down with a patient and try to arouse his enthusiasm over the humble occupation of wiggling his big toe. It will require a very special kind of cheerful, lively, and concentrated interest on the part of the worker to keep the patient busy for a whole hour at any such task as that; hence it is contemplated that the volunteer workers shall devote not more than one hour a day to their task.

Measurements, competitions, sympathy, encouragement, and all such means must be employed by the workers to cause the patients to take an interest in their tasks, and not the least of the difficulties of Dr. Bott's task is that of making the tasks themselves sufficiently interesting for this to be possible.

Mayor Mitchell, of New York City, laid cornerstones in October for a new home for the Cumberland Street Hospital and for a group of 23 new buildings for Seaview Hospital on Staten Island. The capacity of the Cumberland Street Hospital will be increased from 200 beds to 312 beds, and that of the Seaview Hospital, which cares for city tuberculosis patients, from 763 beds to 1,763 beds.

CANADA

What Every Disabled Canadian Soldier Should Know

THAT there is no such word as "impossible" in his dictionary.

THAT his natural ambition to earn a good living can be fulfilled.

THAT he can either get rid of his disability or acquire a new ability to offset it.

THAT the whole object of doctors, nurses, and instructors, is to help him in doing that very thing.

THAT he must HELP THEM TO HELP HIM.

THAT he will have the most careful and effectual treatment known to science.

THAT interesting and useful OCCUPATIONS form a most valuable part of the treatment in Convalescent Hospitals and Sanatoria.

THAT if he cannot carry out his first duty by rejoining his comrades at the front, and if there is no light duty for him with the Canadian forces overseas, he is taken home to Canada, as soon as his condition and the shipping facilities make this possible.

THAT his strength and earning capacity will be restored there to the highest degree possible, through the Military Hospitals Commission.

THAT if he requires an artificial LIMB or kindred appliance it will be supplied FREE.

THAT every man disabled by service will receive a PENSION or gratuity in proportion to his disability.

THAT his pension cannot be reduced by his undertaking work or perfecting himself in some form of industry.

THAT his pay and allowances continue till he is cured or till his pension begins.

THAT an extra three months' pay, field pay, and separation allowance when there are dependents receiving such allowance, will be paid to all men returned from overseas and honorably discharged after at least six months' service---with certain exceptions, such as members of the permanent Force and Federal or Provincial Civil Service who can step right back into their old positions.

THAT if his disability prevents him from returning to his old work he will receive FREE TRAINING for a new occupation.

THAT full consideration is given to his own capacity and desires when a new occupation has to be chosen.

THAT his own will-power and determination WILL ENABLE HIM TO SUCCEED, both in the training and in the occupation afterwards.

THAT his MAINTENANCE and that of his family will be paid for during the training he may receive after discharge, and for a month longer.

THAT neither his treatment nor his training will cost him a cent.

THAT his home Province has a special Commission to assist him in FINDING EMPLOYMENT on discharge.

THAT hundreds of towns and villages have committees, associations and clubs to welcome him on arrival, and to help in securing a position for him.

THAT the Dominion and Provincial Governments, the Municipal authorities, and all sorts of employers, give the returned soldier PREFERENCE in filling vacant positions.

THAT the returned soldier wishing to TAKE UP LAND and farm it, will be helped to do so, under Federal and other settlement schemes.

THAT the Military Hospitals Commission exists to carry out his restoration and training in Canada.

THAT the Board of Pension Commissioners exists to distribute the pensions provided by his country for him and his dependents.

THAT the Military Hospitals Commission and the Board of Pension Commissioners are in the position of TRUSTEES, APPOINTED FOR HIS BENEFIT and representing the whole people of Canada.

THAT, therefore, he should write direct to the Commission or the Board if he needs advice or help.

Canadians are unanimously resolved that every returned soldier shall have a full opportunity to succeed. When that opportunity is put within his reach, his success will depend on his own good sense in seizing and using it.

MILITARY HOSPITALS COMMISSION, 22 VITTORIA STREET, OTTAWA
BOARD OF PENSION COMMISSIONERS, UNION BANK BUILDING, OTTAWA

FIG. 2. Poster issued by the Military Hospitals Commission of Canada.

NOTES ON BRITISH MILITARY MEDICAL ARRANGEMENTS

Work in the Restoration and Reeducation of Disabled Soldiers—Treatment of Cases of Heart Disease

BY A RETIRED ARMY SURGEON.

[Continued from October issue.]

CASES OF NEURASTHENIA AND MENTAL SHOCK

From the commencement of the war a considerable number of cases of nervous or mental breakdown, due either to the shock, or to the continuance of fatigue and exposure, have arrived in England from the various fields of action. There have been three main groups of cases, as pointed out by Lieut.-Colonel W. A. Turner: first, those due to bursting of high explosive shells near the patient, or burial under debris due to such explosion; second, the cases due to general exhaustion of the nervous system from long continued physical and mental strain, sleeplessness, etc.; third, the more chronic cases of mental breakdown, melancholia, and mania. These nervous cases became so numerous that a special inquiry was made into the best means for dealing with the emergency. Two clearing hospitals were established. All "neurological" cases diagnosed as such at the British clearing hospitals overseas were transferred to the Fourth London Territorial General Hospital, Neurological Section; here they underwent a probationary course of treatment, which eventuated in one of three ways: (1) a large number recovered within a short time, and returned to light duty; (2) the most serious cases were transferred to one of the special hospitals for nervous cases at Springfield or Maghull; (3) cases becoming insane were transferred to Netley Hospital, D Block, or to the Napsbury Hospital for such cases, near St. Albans. The other clearing hospital was the D Block at Netley, to which were transferred all cases of acute mental disorder occurring overseas; after a period of observation, these were either transferred to Springfield or Maghull for special care as nervous cases, or to Napsbury, if certifiable for asylum treatment. At all territorial general hospitals a neurological section was established; if the patient's symtoms are slight, or improve quickly under treatment, he is sent on furlough for a longer or shorter time, and then returned to light duty; if, on the other hand, the symptoms continue, or become more serious, he is sent to one of the special hospitals for this class of cases. There are three in Great Britain, one at Maghull, in Lancashire, for the Northern and Western Commands; one at Springfield for the Aldershot, Eastern and Southern Commands; and the Royal Victoria Hospital, Edinburgh, for the Scottish Command. Patients in Ireland are transferred to the King George V Hospital in Dublin.

The neurological section of the Fourth London General Hospital contains 400 beds; it has a special department, known as the Maudsley Hospital, for the care of soldiers suffering from traumatic neurasthenia, hysteria, and the milder psychoses. The similar section at Netley consists of a hundred beds in several wards of the main building. In these hospitals are treated all cases of nervous breakdown and debility, neurasthenia, depression, functional paralysis, etc. Rest, feeding, massage, electricity, baths, and some simple psychotherapy in the way of suggestion and hypnosis, are the measures generally adopted. At the Fourth London Hospital about 40 percent of the cases return to light duty, 20 percent are invalided, and 20 percent are transferred to other institutions for further treatment. The accommodation at the Maghull and Springfield Hospitals together amounts to about 550 beds; the general lines of treatment are rest, feeding, recreation, and, in suitable cases, massage. From the Maghull Hospital about 40 percent of the cases return to light duty. The patients transferred to Napsbury are of a certifiable type, including most of the graver forms of mental disorder, mania, melancholia, general paralysis, epilepsy with mental symptoms, etc. None are actually certified as of unsound mind, but all cases of general paralysis and of epilepsy with insanity, and all patients who had been in asylums previous to enlistment, are discharged to asylums. From 10 to 15 percent are discharged to light duty.

Fig. 1. A ward in the St. John Ambulance Association Hospital, Southport, England. Note the open sides.

In the Royal Navy these cases of nervous breakdown have been treated by specially qualified medical officers in the wards of the larger general hospitals, the patients not being aggregated together, but dispersed as much as possible among ordinary cases of wounds or illness.

ST. JOHN AMBULANCE ASSOCIATION HOSPITAL, SOUTHPORT

An exceedingly complete and well-organized hospital has been established by the St. John's Ambulance Association at Southport, in Lancashire. It is situated in the extensive grounds of two adjoining mansions, and is arranged on the lines of the First Eastern General Hospital, at Cambridge, but, being within the area of the Western Command, is connected with the First Western General Hospital at Fazakerly, near Liverpool. There are eight blocks, connected by covered ways (Figs. 1 and 2). Each consists of a ward with 60 beds, together with nurses' room and kitchen, opening onto a corridor at the end, across which are a sanitary block, with lavatory and bathroom, and nurses' sanitary room for storing bed-pans, etc. The ward walls are open to within 2 feet of the floor on

the southwest side, but windows and shutters are provided alternately on lift-off hinges, as a protection against rain. There is also an opening 9 inches in depth under the eaves on each side, also an opening under the gables at each end, for use when the sides have to be closed on account of bad weather. Patients on arrival are stripped in a well-heated undressing room, bathed, provided with hospital clothing in a special dressing room, and then taken to the wards. Their clothing is also thoroughly disinfected by dry heat. The operating theater, in its arrangements, fittings, and equipment is up to the standard of the best metropolitan general hospitals (Fig. 3). All the kitchen accommodation, nursing quarters, linen stores, etc., are on a most complete scale. Trains bring the wounded direct to the hospital from Southampton, and besides this a considerable number of patients are admitted from the troops stationed in the town. One department has been specially allotted to cases of enteric fever and dysentery, with a thoroughly well-equipped bacteriological laboratory; there are also x-ray and electrical departments. The management of the hospital is vested in a council representative of the different interests concerned; three voluntary and brigade divisions of the St. John Association work together. The nursing staff consists of a matron with thirty-four trained nurses, assisted by members of the voluntary aid detachments (V. A. D.) of the St. John Association. The total cost of the buildings and equipment was £12,000, raised by public subscription; the maintenance charges are met by a War Office grant at a fixed rate per patient per day; to this sum liberal additions are made by the townspeople of Southport.

Fig. 2. Interior of a ward in the St. John Ambulance Association Hospital.

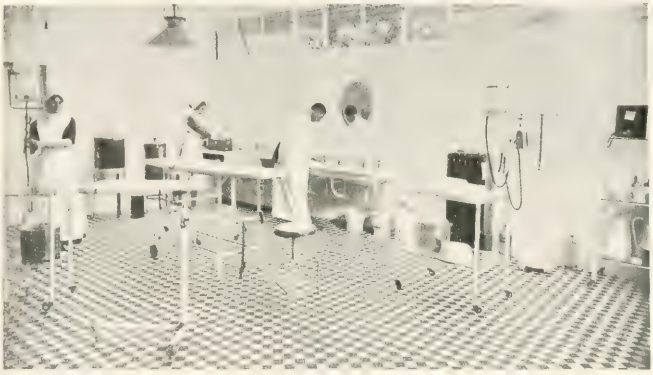

Fig. 3. Operation theater in the St. John Ambulance Association Hospital.

It may be mentioned here that the St. John Ambulance Association is under the control of the Order of St. John of Jerusalem, and constitutes the chief philanthropic work of that body. An ophthalmic hospital is supported by the order in Jerusalem, which is of immense benefit to the native population of that city and the neighboring ports of Palestine. The members of the association are also busily engaged in attending to accidents and casualties of all kinds that may occur on occasions of public processions, or large gatherings of the people for any purpose, in the metropolis or elsewhere. The order originated about 1048, in a hospital dedicated at Jerusalem to St. John the Baptist and provided by some merchants of the city of Amalfi, at that time one of the most important seafaring and mercantile communities in Southern Italy. The order subsequently became military as well as religious, and established hospices in Rhodes, Malta, and elsewhere. Of late years it has shown much activity in England in establishing the Red Cross Society and an efficient system of ambulance aid, as just stated. Its headquarters are at St. John's Gate, Clerkenwell, a very interesting relic of medieval London, unknown to the majority of citizens, but with many associations with the history and literature of the country.

[To be continued.]

The Last Word in Motor Ambulances

Even the modern motor ambulance cannot be said to have met all the needs of the war, remarks *The Hospital* of London. Serious cases require special conditions of comfort, temperature, and silence, which have not been provided hitherto. New types of ambulance have been designed to meet this need by the motor ambulance department of the British Joint War Committee. One type is a single-bedded ambulance, with a light body, folding doors, and an electric heating installation. It is made so that a patient may be carried in it in comparative comfort for a considerable distance. The second is for two beds, in form similar to berths, fitted with electric warmers, and built with duplex panels, with an insulating medium between, so to make them sound-proof. Heating-pipes in parallel rows under each bed are warmed to the desired degree by ad-

mitting a part or all of the exhaust gases from the engine. The windows are also duplex, and the ventilation appears to be artificial. Trials oversea are being made to test their value, when it will be seen if they enable serious cases to be removed by road under such conditions of quiet and temperature as are essential to their comfort. The new types are more like wards on wheels than anything which has yet been attempted in a motor ambulance.

HOW A STATE HOSPITAL HELPS UNCLE SAM

Crippled and Aged Patients Employed in War Relief Work—Thousands of Garments Contributed to War Sufferers by Taunton State Hospital

BY REBA G. CAMERON, R. N., Superintendent of Nurses and Occupational Director Taunton State Hospital, Taunton, Mass.

Today, when the greater part of the world is at war, the word "army" is a common phrase. We speak of the armies fighting in Europe, and in this country the army we are mobilizing should be a source of pride to every loyal American. Let me call your attention to another army of the United States—one that society ranks among the class of dependents, namely, the vast army of unfortunates who comprise the population of our state hospitals and sanatoriums all over the country. The men and women who, "for the large" part, are public charges can be utilized now if never before in helping along the armies on the battlefields of France and Belgium.

For many years the Taunton State Hospital, with a capacity of thirteen hundred beds, has recognized occupation as a valuable remedial agent. Previously, the patients in our hospital have been given work for the therapeutic effect, the value of which cannot be questioned. At the beginning of the present great conflict, which has swept along until three-quarters of the world is involved, we wondered if our patients might not be of service in helping along the cause of justice and right. This state, which supports our institutions, could not be expected to contribute material for our purposes, but if the employees of the hospital would furnish the necessary funds, the patients could be taught to make up war supplies. With the hearty cooperation of our medical superintendent, Dr. Arthur V. Goss, a society was formed, consisting of the staff, nurses, and employees, and each one pledged himself to contribute a small sum monthly as long as the war lasted.

Fig. 1. Male patients knitting sock for soldiers on hand knitting machines.

Today, after three years of the war, the work has assumed such proportions that it is distinctly a new department in our hospital and one that gives promise of continuing until the war is at an end. The funds of the society are spent in buying [illegible] up by the patients under the supervision of the nurses in charge of the wards.

During the first year of the war we made large numbers of women's and children's garments for the destitute Belgians, and it is a noteworthy fact that the first little child's dress (a simple flannel gown for a child of four years), was made up on one of our disturbed wards *by a male patient*, and no apprentice of Worth or Paquin was ever more proud of the result of his labor than this patient. From that time until the present the men and women have worked valliantly and have made thousands of garments for the soldiers, consisting principally of pajamas, soldiers' work shirts, and knitted socks. Special mention must be made of two men patients who work constantly making socks on hand knitting machines. They are both crippled, each having a leg amputated above the knee. They are intensely patriotic, and certainly they are "doing their bit" faithfully and well. Every day, with the exception of Sunday, they may be seen busily working their machines, and each evening they turn in the day's work, consisting of from seven to nine pairs of socks, all completed. These two men alone can make approximately two hundred pairs of socks in one month. Indeed, they used so much yarn that the funds of the society decreased so rapidly that I made application to the local chapter of the Red Cross, and that society, realizing the tremendous amount of work that these men were turning out, unanimously voted to keep them supplied with wool, and for some time the yarn has been contributed by the Red Cross society. Six old ladies, not one of them under seventy, and all on the same ward, have a little knitting society of their own. The leader of this little band is an old Irish lady, very deaf and unable to walk a step, yet she can do two things, namely, knit and talk, and, incidentally, she does both well. She keeps several of her band knitting

Fig. 2. Women patients making soldiers' supplies.

Fig. 3. This colored man says he *thinks* he would make a good soldier, but he *knows* he can make a good shirt.

only legs of socks and she turns the heels herself, for, she says, "Faith, and the heels and toes some women o' today turn out are enough to cripple the soldier boys for life without the aid of a German bullet."

I have been asked if disturbed patients are of any help in the relief work. In reply I would like to cite one instance which occurred a few months ago. I was going through a disturbed ward carrying some large sheets of white cardboard, a small brush, and a bottle of ink, on my way to get some patriotic posters printed. I was stopped by an excited manic case with these words, "Miss Cameron, did you ever see me print? Let me try!" Out of curiosity I gave him the materials and sat down to watch him. Although he was in an acute stage, with a rapid flight of ideas, this did not hinder him from doing some excellent work on the patriotic posters, and for two hours he worked steadily and begged to be allowed to do more the next day. Patients of all classes have contributed their aid in helping along the work, and we have donated over seven thousand garments to the war sufferers, composed largely of shirts, women's and children's garments, hospital pajamas, and knitted socks, made up,

Fig. 4. The elderly men patients, as well as the young men, take an interest in making shirts for Uncle Sam's army.

for the most part, by patients who gave their services voluntarily, and their attitude was one of thankfulness that they could be of some service to their country.

At the present time we are planning to convert one of our large wards into a war relief center, where the largest part of the work will be done. Every afternoon patients from all over the hospital who wish to work for the war will be brought to this ward for two or three hours. Several sewing machines, a cutting table, supplies, etc., will be there, and the work will be cut out, made up, and packed, ready for delivery. One afternoon each week we will serve tea or cocoa and cakes, and before long we anticipate that this will be the most popular ward in our hospital.

It has been demonstrated beyond a doubt that the so-called dependents in our hospital have been of inestimable value since the war began. They are "doing their bit," even though confined in a state hospital.

In previous articles I have dwelt on the economic side of occupation, as well as the therapeutic effect on the individual, and I am more convinced than ever that occupational therapy is destined to play a more important part in the future than ever before. The reason for this is obvious. If the war continues it will not be long before this country will be flooded with cripples and disabled men, and it will be somebody's business to see that these men are taught crafts suitable for their particular needs. Oh, yes, a pension is all very well for the man who has both legs shot off—he surely deserves it—yet a pension plus the knowledge of how to fill in the long years ahead of him with useful work will be better still.

* * * *

SOME WAR BOOKS

Medical Diseases of the War—Sanitation for Soldiers—Impressions of an American Red Cross Volunteer in France—Letters from the Edith Cavell Nurse of Massachusetts

From among the innumerable books about the war now issuing in a seemingly inexhaustible stream from the press, we have selected for comment here this month four as of special interest to readers of THE MODERN HOSPITAL.

The author of "Medical Diseases of the War," Major Arthur F. Hurst, is better known under his former name of Hertz. English by birth and descent for several generations, he is one of those who have been led to discard a German name in the present crisis. Early in the war Major Hurst was physician and neurologist to a number of military hospitals in London and to the New Zealand Hospital at Walton-on-Thames; later he was appointed a member of the Medical Advisory Committee for the Prevention of Epidemic Disease in the Mediterranean Expeditionary Force in Lemnos; subsequently he acted as consulting physician to the British forces at Salonica. He is now in charge of the neurological section at Netley. His book, based on this wide experience, is a record of his own observations amplified by a study of the literature so far as time and opportunity have allowed. He discusses functional, nervous disorders, amebic, bacillary, flagellate, and ciliate dysentery, amebic hepatitis and hepatic abscess, trench fevers, paratyphoid fever, epidemic jaundice, a form of beri-beri occurring among British troops, soldier's heart, war nephritis, and gas-poisoning. Major Hurst's exceptional facilities for the study of these conditions have enabled him to write a book which medical men on active service will be likely to find of great value.

The next book on our list is addressed not to medical men, but to the soldiers themselves. In a tiny pamphlet which can easily be slipped into a corner of the soldier's knapsack, Lieut.-Colonel H. R. Kenwood takes up the elements of camp sanitation and of personal hygiene as applied to the soldier.

The two remaining volumes are records of experiences at the front. Both are by Americans.

"The Aftermath of Battle," by Edward D. Toland, is a narrative of a volunteer worker with the Red Cross at the battle front. Mr. Toland, a Princeton graduate of 1908, who had been in the banking business for two years preceding 1914, found himself with nothing to do when the bank shut down temporarily at the outbreak of the war. Adventure called; he crossed the Atlantic in the steerage, arriving in France just after the end of the battle of the Marne, and immediately went into service. Chaos still reigned in French military hospitals; official red tape and unofficial disorganization, inefficiency, and lack of discipline doubled and trebled the horrors of the battle aftermath. Later he records improvement in these respects. He gives a vivid though fragmentary picture of that strange life in which death and horrible mutilations are reduced to commonplace.

The last book on the list is a collection of letters from the Edith Cavell Nurse from Massachusetts, Miss Alice F. L. Fitzgerald, to which is appended an account of the imprisonment, trial, and death of Edith Cavell. At a

memorial service in honor of Edith Cavell, held in Boston at the end of 1915, it was decided to offer an "Edith Cavell Nurse from Massachusetts" to the English government to serve with the British expeditionary force in France for the duration of the war. The royalties from the little book to go to the support of the Edith Cavell Nurse in France.

Medical Diseases of the War. By Arthur F. Hurst, M. A., M. D. (Oxon.), F. R. C. P., Temporary Major R. A. M. C.; Physician and Neurologist to Guy's Hospital; Neurologist to the Royal Victoria Hospital, Netley; Lately Member of the Medical Advisory Committee, Mediterranean Expeditionary Force, and Consulting Physician to the Salonica Army. Second impression. Pp. 151. Cloth, price $1.75. Edward Arnold, London, 1917.

Health in the Camp. A Talk to Soldiers. By H. R. Kenwood, Temporary Lieutenant-Colonel R. A. M. C.; Professor of Hygiene and Public Health in the University of London, etc. Pp. 58. Paper, price 15 cents. The MacMillan Company of Canada, Ltd., Toronto, 1916.

The Aftermath of Battle. With the Red Cross in France. By Edward D. Toland, with a preface by Owen Wister. Pp. 175, with illustrations. Cloth, price $1. The MacMillan Company, New York, 1916.

The Edith Cavell Nurse from Massachusetts. A record of One Year's Personal Service With the British Expeditionary force in France, Boulogne-The Somme, 1916-1917. With an Account of the Imprisonment, Trial, and Death of Edith Cavell. Pp. 95. Boards, price 60 cents. W. A. Butterfield, 59 Bromfield street, Boston.

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THE CARE OF SOLDIERS' DEPENDENTS

Various Sources of Assistance for Dependents of Enlisted Men in Canada—Benefits Include Assigned Pay, Separation Allowance, Life Insurance, and a Special Fund

The Children's Bureau has issued a report on the care of dependents of enlisted men in Canada, which is particularly timely, as this problem will soon become one of immediate importance in this country. The plans adopted by belligerent nations in Europe are interesting, but hardly applicable to this country on account of different standards of living. In Canada, however, the situation is more nearly comparable to our own. The assistance extended by the Canadian government comes under two general classes, namely, pensions payable while in service and pensions payable after discharge. The dependents of an enlisted man may receive assistance from four sources. These are:

1. Assigned pay. Enlisted men are required to assign at least one-half of their pay (not including field allowance) at the time of their enlistment, and are permitted to assign not more than twenty days' pay. Officers are not required to assign any definite amount.

2. Separation allowance granted by the Canadian government to dependents of volunteers. This varies from $20 a month for privates to $60 a month for lieutenant-colonels. No allowance is made for children in this arrangement.

3. Life insurance. In certain localities in Canada, families of enlisted men are protected by life insurance, the premiums of which are paid by the municipalities in which the volunteers resided at the time of their enlistment. The policies in most cases have been issued by insurance companies located in the United States. In Toronto, however, three-fourths of the insurance is being carried by the city of Toronto itself, a $2,000,000 bond issue having been floated for this purpose. Every officer and enlisted man residing in Toronto at the time of entering the service has, from the date of his enlistment, a life insurance policy for $1,000.

4. The Canadian Patriotic Fund, incorporated. This fund, organized in 1914, renders assistance to families in need whose income from all sources is insufficient for their needs. The resources of the fund are derived from volunteer contributions and from grants made by the provinces as well as cities and counties.

Applying these various means of relief to a specific case, the wife of a private having three children between the ages of 10 and 15 would receive the following sums monthly: assigned pay of a private, $15; separation allowance, $20; Canadian Patriotic Fund, $25; total, $60. From September 1, 1914, to April 20, 1917, nearly $17,000,000 was dispensed to soldiers' dependents, while over $6,000,000 was on hand for further distribution. Benefits payable after discharge include pensions in case of disabled men, and payments during reeducation and preparation for self-support. Pensions range from $480 a year for enlisted men, to $2,700 a year for brigadier-generals, there being six classes of disability ranging from 20 to 100 percent. In case the soldier is killed or dies as the result of injuries received or disease contracted in active service, the widow is entitled to a pension and an allowance for children. This amounts to nearly as much as the pension for total disabilities, the allowance for the widows of all men below the rank of petty officers being $432 a year, with $66 additional for each child, that of the widow of a commodore or brigadier-general being $2,430 a year, with an allowance of $108 for each child.

Much is being done to fit disabled and incapacitated soldiers for self-support. A military hospitals commission has been organized, which sees to it that the disabled soldiers go to the hospital home or sanatorium which will give them the most efficient treatment and restore them to the most complete condition of health possible. [An account of the work of the Military Hospitals Commission of Canada, kindly furnished by the officials of that organization, appears in this issue.] While under the supervision of the hospitals commission, the soldier receives his regular pay and his family receives all allowances, he being regarded as still in active service. On being discharged from the hospital and the service, he is passed on to the board of pension commissioners, and the first pension installments is paid him on the day that he is discharged. In each district a vocational officer keeps track of the discharged man. If it is found necessary to teach him a new trade, a course of instruction is outlined for him. While taking this course he receives a pension, an allowance of $8 a month by the commission, his maintenance at one of its institutions or an allowance of a dollar a day if he lives at home, with a further allowance to his wife of the difference between the $35 a month and the pension paid to her husband. Allowances are also made for children at different ages, the whole forming a maximum of $55 a month for the wife and children and which, with the $1 a day maintenance allowance and the $8 from the commission, gives the family a total monthly income of $93. The pamphlet issued by the Children's Bureau also contains in the appendix pay and allowance tables, reports of the board of control of Toronto on insurance, the act incorporating the Canadian Patriotic Fund, and numerous other laws, ordinances, tables, and blanks of use in studying this subject.

The Bainbridge Hospital, Bainbridge, Ga., moved into a new $80,000 fireproof building October 1. The hospital is owned by Dr. A. E. Alford.

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES.
Dietitian of Lakeside Hospital, Cleveland, Ohio.
Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, O.

Mrs. Clara Pressler, of Cincinnati, O., offers us another example in proof of the statement so frequently made in this department, that intelligence, judgment, and executive ability are just as essential in the business of feeding people as they are in any other business.

Mrs. Pressler's large number of patrons in two restaurants give ample evidence of the satisfactory way in which she manages her business, though she is still a very young woman.

W. W. Major says of her in the October number of the *American Magazine:*

"Mrs. Pressler looks at her business as a mission of mercy. She knows that everyone who enters her restaurant for a hurried meal has more or less trouble, and she feels that if she can bring a little sunshine into the lives of her patrons by well-cooked, well-served meals, she is doing her bit to make the world a little better. She knows that many of her patrons have no home life, and so she tries to create an atmosphere among her employees and customers that will make them all feel a little happier, a little more content with life. And she has succeeded, not only in her business, but in her theory."

Think what it would mean to many other thousands of people who are being fed in our institutions if every hospital had a dietitian with a theory similar to that of Mrs. Pressler! The daily routine of hospital life brings with it many troubles, fully as varied and numerous as those of restaurant patrons. The meal hour usually affords the opportunity for repeating and discussing all the unpleasant happenings of the day. It naturally follows that in such an atmosphere of criticism the food will "get all that is coming to it" if there be any cause for complaint. But if the dietitian "can bring a little sunshine into the lives of her patrons by well-cooked, well-served meals, she is doing her bit to make the world a little better." Very few people in the hospital have any home life; it is not possible to feed large numbers of people, however, with food which has the flavor of "home cooking." It is frequently impossible to serve the food in a way which has any semblance to home service; so here, too, is the place to "create an atmosphere" that may counteract the feeling of discontent or criticism brought into the dining room from the daily task.

In many hospitals the position of the dietitian is not such that she can bring this about by her own efforts, but with proper cooperation between the dietary department and the training school it can be accomplished.

At the meeting of the American Hospital Association recently held in Cleveland, discussions of the dietary department and the dietitian indicated that there is rapidly developing a strong tendency toward the well-trained woman in charge of the dietary department. This is opening a big field to the trained woman, and greatly increasing the efficiency of the institution, *if* she is given authority to carry out her plans. But it is an injustice to the dietitian and to the hospital to put her in a position with so much responsibility that she sinks clear out of sight, then never give her a helping hand.

Responsibility of a Superintendent for Correct Dietary

BY FLORENCE A. BLANCHFIELD, Bellevue, Pa.

It is related that Bronson Alcott, the father of Louisa M. Alcott, was a great advocate of the vegetarian diet. On one occasion he was expounding to the famous Carlyle his theory that people tend to become like what they eat. "For example," he said, "if one lives on pork he becomes hoggish; if he lives on beef he becomes ox-like; if he lives on mutton he becomes sheep-like; and so on."

"Yes," said Carlyle, slowly, "but don't you think, Mr. Alcott, that if a man lives altogether on vegetables he is in danger of becoming pretty small potatoes?"

In spite of Carlyle's witty reply, science is proving to us that our diet is a matter of supreme importance; it does make a difference what we eat, and even the best of foods may be taken in the wrong quantities and combinations. One authority observes that the average American meal contains combinations of food capable of forming a chemical reaction in our stomachs almost violent enough to blow a glass retort into bits.

No competent institutional employee, particularly in a hospital, would be guilty of feeding to those in her charge actually dangerous combinations of food. But our responsibility—and, of course, this responsibility devolves in the last analysis upon the superintendent—does not end here. We must be sure that the diet of those under our care is correctly balanced, as well as entirely safe. A diet consisting almost entirely of starches may form no dangerous compounds in the process of digestion, but the lack of other necessary elements will prove harmful in the long run.

The superintendent's responsibility for a correct dietary will vary according to the size of the institution and the competence of employees. But in all cases there is a responsibility of some sort. If a mistake is made, the superintendent cannot absolve herself of blame by saying: "The employee did not understand her business." It is the place of the institutional head to see that the employee does understand her business—or, if there is any doubt, carefully to supervise details of her work. This is a heavy contract. It would almost seem that the superintendent, to keep well in hand all the details for which she is responsible and to prevent errors, would have to be omniscient. And that is just what she must endeavor to be.

Though a specialist may be in direct charge of the diet kitchen, though physicians prescribe for the patients, and though the nurses are given special training in the principles of feeding in health and disease, the superintendent will receive many delicate questions for settlement from the heads of departments. She must be prepared to give an instant, well-judged decision. It is ability to make quick decisions that determines the executive, and knowledge of the subject is the foundation of such ability.

Remembering this, the head of a hospital will herself keep up with the latest discoveries concerning diet in disease, the importance of which has long been recognized.

Even though the physician may lay down rigid rules for a patient's diet, there is usually some leeway for the judgment of the nurse or the idiosyncrasies of the indi-

vidual. A patient in a certain hospital was asked by the nurse:

"Is this beef too rare for you, Mrs. Simpkins?"

"Well, since you ask me," said the patient, "I *would* like it a little oftener."

It is to be hoped that the good lady had her wish granted, but the story leaves this important point unsettled. Seriously, it is wise for the superintendent to instruct nurses to humor the patients' preferences as much as possible within the limitations prescribed. The effect of foods upon the patient should be observed, and those which do not agree with him or her should be sparingly used. If any recommended article of food disagrees, it is better to reduce the quantity of it than to cut it out of the dietary altogether. The physician expects—and should have—implicit obedience to his instructions; but intelligent obedience is always preferable to blind obedience.

Except in certain disorders, such, for example, as diabetes, in which carbohydrates must be eliminated, or gout, in which uric acid-yielding substances are avoided, the purpose of feeding is to build up the patient's general constitution—to supply muscular and other power for the work which the body is required to do, to furnish heat, to form the tissues and fluids of the body, and to repair its wastes.

If the diet is to perform these functions properly, it must be well balanced. The instinctive cravings of the palate are not always a sure guide. Many people—especially those who come within the jurisdiction of a hospital—have corrupted this natural guide. A scientific study of the needs of the body, of foods and their combinations, is necessary for one who would provide a well-balanced diet. The subject is of many ramifications. The number of calories required for the maintenance of the human body; the proportions of protein, fat, and carbohydrates necessary for maintaining the organism under various conditions; the constitution of the various foods, their correct preparation, their coefficients of digestibility, and the most efficient combinations of foods, should be understood. Tables covering these subjects are available and should be carefully mastered. But the theoretical knowledge gained by the student should be constantly modified and supplemented by observation of particular cases.

An illustration of the advance in human knowledge concerning nutrition is found in the developments of the present war. The problem of rationing is being handled now by the government food commissions from the point of view of the newer school of dietetics. In Germany, the first country to realize the pinch of necessity, a scientific diet has been prescribed for an entire nation. War cookbooks have been issued by the million and adapted to the needs of the various parts of the empire. German food reports discuss the ration in terms of calories instead of pounds and tons. Food control, based upon this scientific rationing, is the measure which has chiefly enabled that nation to hold out against a world of enemies. It is significant that, in spite of the very much reduced quantity of food, the people are—according to seemingly well-founded reports—on the whole healthier and better nourished than they were before the war. This is the result of eating, as nearly as possible, according to scientific rules.

It is an axiom that the better-fed nation will win a war. If it is worth the while of a national government to exercise careful supervision over the ration of its people, how much more definite is the responsibility for a correct dietary in hospital administration.

One phase of this subject which should not be overlooked is that the superintendent's responsibility does not end with the supervision of what the patients eat. The well-being of the nurses is a matter of equal importance. A great general has said that an army travels on its stomach—meaning that rationing was the question of supreme importance in giving men the courage and endurance necessary for efficiency in battle. Similarly, a properly nourished corps of nurses is essential in the vigilant war waged by the hospital against disease. It is a strange fact that nurses who understand thoroughly how to feed properly the patients under their charge, in many cases seek for themselves the most unwholesome diets—pastry, candy, and foods that stimulate rather than nourish. Thereby they lower their own endurance and power of resisting disease. The administrator is especially responsible for the well-being of the nurses under her charge, and one way to insure this well-being is to see that their diet is healthful and nourishing.

In the present time of stress there is an even further responsibility—that of food conservation. Public and semi-public institutions should take the lead in the great crusade that is being waged against waste. Those in charge of the diet kitchen should be given special cautions and instructions, if necessary, in the economical employment of food materials. The feeding of large numbers of people permits of greater opportunity for carelessness and waste than occurs in the ordinary household; but there is also greater opportunity for close calculation and saving. Let our hospitals "do their bit" in helping the nation to fight the internal enemy of waste.

Conservation of Food

BY DR. J. A. WESENER and GEORGE L. TELLER, of The Columbus Laboratories, Chicago.

[Continued from October issue.]

Accepting, then, the very apparent fact that the fibrous matter of whole wheat and graham flours is a detriment to human foods rather than an improvement, we must look to other principles for an explanation of the acknowledged benefits which are clearly derived in many instances from such foods.

A study of the development of the wheat grain shows us that in the earliest stages of its formation, before the more starchy portions are built up and the flouring parts of the grain are formed, we have a superabundance of materials present which do not enter into wheat flour in any considerable proportion. These same parts, or parts of a similar nature, are contained both in the bran and in the germ of the grain, which in the natural course of milling find their way into the offal and not into the flour. They consist of an abundance of mineral salts, of amino bodies, which latter are partially built up proteins, and of bodies of a fatty nature.

As to the importance of mineral salts in human food, there can be no question. The most abundant of these salts in the wheat grain are the phosphates, but there are others of lesser amount which are invariably present, although some of them are in such minute quantities that they are scarcely revealed in the ordinary methods of mineral analyses. At least some of these tend to segregate themselves in the wheat grain and are deposited in the outer parts, so that we find a somewhat marked difference in the makeup of the ash as it is obtained from the bran, from the germ, and from the flour. Plants growing upon different soils take from the soil mineral materials which those soils contain, whatever their nature may be.

These ash elements are often looked upon as wholly accidental from the standpoint of the growing plant, but that they have a value or an influence upon the animal body consuming them, there can be little doubt. Such elements are manganese, iodine, fluorine, and perhaps others. Even arsenic, when carefully sought for, has been found to be a general constituent of animal bodies and presumably has an influence upon their development. Copper is present and adds luster to the plumage of the dove.

Many of these mineral elements are brought to the body through other foods when a mixed diet is provided, so that the consumption of flour and other refined products of grains does not restrict their supply to a detrimental extent if sufficient variety is given to the diet. On the other hand, if these elements are not supplied from some source, evidence of malnutrition and even of a diseased condition of the body becomes apparent.

The amino bodies of vegetable products consist of partially built-up or partially broken-down proteins. A study of the composition of parts of growing vegetables at different times of growth enables us to follow readily these changes. Protein, which in the leaf of the grain is clearly identified as such in the earlier stages of growth, disappears from the leaf and is transferred to the seed after being first changed from protein to amide, and again presents itself as protein in the seed by being changed from amide to protein. Amide is abundant in the young and immature wheat grain when it begins its formation, but steadily decreases in amount as the grain ripens. It is also distinctly more abundant in the wheat bran and in the wheat germ than in the interior of the grain, which is converted into white flour. Amides of the wheat grain consist of two or three different bodies which have been isolated, and it is probable that others exist, at least in minute quantities, which have not been isolated. There are abundant possibilities of the presence of bodies closely related to amides which have not as yet been separated, but which have nutritional value in our food. Proteins of different plants and parts of plants, when split up by proper means, yield different amides or amino acids, and various proportions of different amino acids, and investigators are finding that there is a relation between the composition of individual proteins as shown in this manner and their use as a food for the body. The fats, too, are relatively more abundant in the bran and in the germ than in the white flour of the grain, and so also are other bodies of a fatty nature, as, for example, lecithin, which is known specifically to be of material value from a medicinal or perfect nutritional standpoint.

There is an abundance of evidence that extracts of wheat bran and wheat germ, when supplied to animals suffering from diseases brought about by imperfect diet, remove the cause of disease, or supply a defect, and perfect its cure. It may be that the interpretations as to the identity of principles which are instrumental in bringing about this change have not as yet been clearly worked out, but the experimental data at hand are sufficient to demonstrate that such principles are present and do give the results indicated.

The action of these principles appears to be independent of that of the grosser food constituents—the ordinary fats, the carbohydrates and the protein, the value of which, as sources of bodily energy and tissue are of course not to be in any way depreciated.

In the many letters which come to us asking advice about reducing menus, using substitutes for high-priced food materials, and other means of combating the present high prices, no other subject is so frequently asked about as is the use of oleomargarine for butter.

The New York *Times* recently published a letter written to the editor by Haven Emerson, commissioner of health, on the use of oleomargarine. A part of this letter follows:

"In your editorial comment of recent date on the necessity of revision of national and state restrictions upon the manufacture and sale of oleomargarine, you do a public service in urging release from a form of class legislation which contributes not a little to the unnecessary cost of butter and other edible fats. The controller of New York City is compelled to waste, at the present prices of butter and oleomargarine, close to $40,000 a year, because he is not allowed to buy for the hospitals and institutions under the jurisdiction of the city oleomargarine instead of butter. Legislation in the interest of the farmers, coupled with misinformation, is responsible for the present state of affairs.

"Oleomargarine is made exclusively in Federal-inspected slaughter houses and is subjected to a pasteurizing process during manufacture.

"Butter is made from cream from untested cattle, probably 20 to 30 percent tuberculous, and made in a multitude of farm and dairy premises and butter factories, unsupervised and known to be, in many instances, unsanitary.

"Oleomargarine is used by the Association for Improving the Condition of the Poor, the City Mission, Brooklyn, Fort Totten Post Hospital, regiment of regulars, Sea Girt and Fort Hamilton, the Department of Health Lunch Room, and by public institutions in the following states: Massachusetts, Rhode Island, Indiana, Illinois, West Virginia, Kentucky, Kansas.

"Weight for weight, and quality for quality, oleomargarine is of equal value with butter, and is as wholesome, nutritious, and palatable. Its use is extending steadily on its merits. . . .

"As butter is never an exclusive article of diet and as milk or vegetables and fruit in the general diet of children and adults contain the substances other than fats, which butter has and oleomargarine has not, there is no disadvantage from the point of view of caloric value or of other food ingredients in replacing butter by oleomargarine in table use and cooking for children and adults.

"If our legislators at Albany and Washington wished to do a real service in reducing the cost of food in one instance, they would repeal all the embarrassing restrictions now put upon oleomargarine, while retaining the valuable protection which guarantees the sanitary safety of its manufacture."

The Hospitalization of Sick and Seriously Wounded Prisoners of War in Switzerland

Last May, says the *American-Swiss Gazette* of New York, there were in all 28,367 sick and wounded prisoners of war interned in Switzerland. Of these 8,572 were German, 15,735 French, 1,931 Belgian, and 1,875 British soldiers. The greater part of the latter are interned at Chateau d'Oux, in the Canton of Vaud. A large hotel has been converted into a hospital. The tuberculous patients are treated in Dr. Rollier's famous heliotherapeutic establishment at Leysin. All soldiers who have been cured of tuberculosis, as well as those who have passed the fortieth year, will soon be repatriated, under the condition that they will not serve again in the army. The pure mountain air has a wonderful effect on these patients. Pale, emaciated men have become strong and healthy, and even the cripples are full of life and vigor. They live on excellent terms with the native population, and not a few have married Swiss girls.

It is now pretty general to make a strong point, and properly to impress upon each nurse, that silence is golden. No woman with a tongue like a rattle can ever become a good nurse.—The Hospital, London.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army.

A Plan for the Systematization of the Buildings of the Hospitals of Rome (Proposta di sistemazione edilizia degli ospedali di Roma). Osp. maggiore, Milano, 1917, V, No. 2.

Two million francs have been appropriated by the board of hospitals of the city of Rome for the purpose of systematizing its hospitals. With this sum it is proposed to enlarge and remodel a number of the hospitals of the city, to construct isolation buildings in all the hospitals, and to erect a large sanatorium for tuberculous patients on the seashore and another one in the mountains. Both these sanatoriums will be connected with the city hospitals.

Hotel Sanatoriums and Sanatoriums for Tuberculous Patients in the Region of Itatiaya. Dr. O. de Souza. Brazil-Medico, Rio de Janeiro, 1917, XXXI, No. 23.

The region of Itiaya, in the state of Rio de Janeiro, with its healthy climate and varying altitudes, presents special advantages for the treatment of tuberculosis. A special commission of the National Academy of Medicine has examined the question and recommends the establishment of sanatoriums for the tuberculous in this region. Sanatoriums for special cases of tuberculosis may be located as high as 2,000 meters above the sea. The commission recommends that the construction, installation, and management of these sanatoriums be placed under strict supervision of the government.

Care of the Insane in Japan. Dr. N. Ishida. Am. Jour. Insan., Baltimore, 1917, LXXIII, No. 4.

As in all other countries, the treatment of the insane in Japan has been one of neglect and cruelty. Some progress has been made, but much remains to be done. The first public asylum was established in Kyoto in 1875. But the institutions for the care of the insane are still so few that more than four-fifths of the patients are kept at home, where they are usually locked in dark cages and gloomy dungeons. A few years ago small hospitals for the insane were established in connection with the medical schools at Kyoto, Osaka, Kanazawa, Chiba, and a few other places. In all these institutions the no-restraint system is strictly observed. The Nagasaki hospital was the first in Japan to adopt the open-door system.

Report on a Plan to Create Stations for Evening Consultation and Treatment for Syphilitics in a Certain Number of Hospitals of the General Administration of the Public Hospital Service. Dr. L. Brocq. Bull. et mém. de la Soc. méd. des hôp. de Paris, 1917, XXXIII, No. 17.

In order to combat the spread of syphilis, the Medical Society of the Paris Hospitals demands the establishment of a number of dispensaries where syphilitics may be examined and treated free of charge. The class of people for whom these dispensaries are to be established are workingmen and working women, or small tradesmen who have no time during the day to seek medical aid. It is proposed to attach these dispensaries to some of the great hospitals of Paris. Six such hospitals have already been selected and the distribution of the dispensaries is such that they are easily accessible to the working population. The diagnosis and treatment of syphilis, which in modern times have been greatly perfected, require special apparatus and facilities where these dispensaries are to be installed.

Sunlight and Hospital Construction (Pro Sole). Dr. C. van Walsem. Ziekenhuis, Amsterdam, 1917, VIII, No. 5.

Sunlight as a factor of cure has at all times played an important part in hospital construction. In densely populated cities the demands for light and air must necessarily be limited on account of high land values. But mistakes are frequently made that could be avoided. It is not rare that the main front of hospitals is turned toward the southeast. If the builder can choose between a southeastern and a southwestern front, he ought to decide in favor of the latter, because the patients will have the benefit of the sun a longer time than is the case with a southeastern exposure. If a hospital is to be built on the west side of a street or road running east and west, it should front toward the southeast; if on the east side, it should face southwest.

The First Attempts at Heliotherapy in Brazil. A. Moncorvo Filho, M. D. Brazil-Medico, 1917, XXXI, No. 6.

The author, who is director and founder of the Institute for the Protection and Care of Children in Rio de Janeiro, has recently established a special service of heliotherapy in this institution. The solarium used for this purpose is located on spacious grounds in the suburbs of the city. Here a large number of children with general and localized tuberculosis are exposed to Dr. Rollier's famous method of treatment. In spite of the fact that the weather during the first months of the present year has been very unfavorable, the results so far obtained have been very good. The author is especially enthusiastic with regard to the results of the treatment in cases of tuberculosis of the bones and joints. The article contains the detailed history of a great number of cases, in some of which the results obtained were most remarkable, proving that it is not at all necessary that heliotherapy should be combined with high altitude, though high elevation is very favorable to the action of the sunlight.

Sanatorium "Carit" for Tuberculous Patients (Sanatorio "Carit" para tuberculosos). Gac. med. de Costa Rica, 1917, No. 40.

As in other countries, the care of tuberculous patients is also a problem in the Republic of Costa Rica. A commission has recently been appointed to select a locality for a sanatorium to be erected. A place near Tierra Blanca, north of the city of Cartago, was chosen. It fulfills to a high degree all the conditions for such an institution. The question of altitude plays here an important part. The European sanatoriums are all at an altitude of 1,000 to 1,500 meters (over 3,000 to nearly 5,000 feet). In the United States an altitude of 4,000 feet is considered to be sufficient. But as all the cities of Costa Rica are situated above an altitude of 1,000 meters a sanatorium for tuberculous patients would there naturally require a higher altitude. The commission therefore wisely selected a place 7,349 feet above the level of the sea. The sanatorium is well protected from the north winds and pre-

sents unusual advantages for heliotherapy. The institution consists at present of a central administration building and two pavilions, one for men and one for women. All the structures are frame buildings. Only patients will be received who are in the initial stages of the disease and who present a possibility of a permanent cure.

The Tuberculosis Sanatorium for the Chinese at Kuling. China Med. Jour., Shanghai, 1917, XXXI, No. 2.

The Kuling Tuberculosis Sanatorium is situated in the mountains of Kiangsi, 3,500 feet above the sea. The air in this region is dry and invigorating and very beneficial in lung diseases. Even in the depth of winter patients react to the cold, dry temperature and experience much less discomfort than in the damp atmosphere of the plain. The very latest and most approved methods for the open-air treatment of pulmonary tuberculosis are in use at this sanatorium. The open-air treatment has been very successful, as practically all patients in the early stage of the disease recover and patients with advanced disease all improve while they stay at the institution.

The Reform of the Foundling Hospitals. M. Flamini, M. D. Policlinico, Roma, 1917, sez. prat., XXIV, No. 15.

Among the institutions which need a radical reform after the war are the foundling hospitals. Of 58,000 illegitimate children cared for in Italian foundling hospitals during the year 1905, 14,000 died before they had completed the first year of life. This great mortality is due to the difficulty of finding wet-nurses for these babies. To remedy these conditions the author proposes a law which forbids any mother to send her illegitimate child to the foundling hospital unless she can present a certificate by a physician that she is unable to feed her child at the breast. If she can feed the child but is poor, she shall take care of the child at least during the first six months, the hospital paying her a monthly subsidy. If such mothers are willing to serve as wet-nurses in the hospital, they shall be accepted, the hospital paying them a reasonable salary.

Heliotherapy in the Treatment of War Wounds. Dr. Magrassi. Riforma med., Napoli, 1917, XXXIII, No. 14.

In combating surgical infection the sunlight is a most valuable aid to the surgeon, not only on account of its germicidal power, but also on account of its stimulating effect on the elements of repair and regeneration in the body. These advantages were quickly appreciated during the present war. In France and in England, sunlight is extensively employed in the treatment of wounds. In the great hospital at Cambridge there are large sheds opening toward the south, where sick and wounded are daily exposed to the curative action of the sun's rays. The author has had a wide experience with heliotherapy in an Italian field hospital, as well as in the territorial Red Cross Hospital at Brescia. Large suppurating wounds of the soft parts, comminuted fractures complicated by suppuration, and amputation stumps in various stages of sepsis were treated by heliotherapy. The results, the author adds, were truly marvelous.

The Registration of Out-Patients. Dr. G. Hadden. China Med. Jour., Shanghai, 1917, XXXI, No. 1.

The loose-leaf register is the most satisfactory system for registering out-patients. It is simple and easily installed. No printed sheets are necessary. The only other essential is a ticket for the patient. The doorkeeper gives to each patient a ticket and a half-sheet of blank paper. On the latter he fills in the name, age, address, etc., and adds the date with a rubber date-stamp in the right-hand upper corner below the register number, which number is repeated on the ticket. The patient brings ticket and sheet to the consulting room. The doctor writes in any notes he may choose before passing the patient on to the surgery or dispensary, where the sheet is retained and the ticket returned to the patient for his next call. In the evening the doorkeeper collects the sheets and files them by number in a box, ready to be taken out on the next day. To save the sheets from crumbling in the waiting room they may be placed on a holder of thin wood a little larger than the sheets, the latter being held in place by a thin string.

The New Division for Babies in the Emma Children's Hospital in Amsterdam (De nieuwe zuigelingenafdeeling van het Emma-Kinderziekenhuis te Amsterdam). Dr. J. C. Schippers. Ziekenhuis, Amsterdam, 1917, VIII, No. 4.

In 1915 a former isolation building of the Children's Hospital was remodeled for a babies' division. The building has two stories and a basement. The first floor contains, besides the kitchen, a large room in which there are twelve cribs ranged along the south side with an interspace of 1.1 meters (about 3 feet 6 inches) between the beds. On the second floor are two smaller rooms, one with four, the other with two cribs, and a couveuse room. The attic contains the rooms for the nurses. The milk kitchen is in the well-lighted basement. The bottle sterilizer consists of a basin of galvanized iron and is heated by gas. Every morning the nurse at the head of the kitchen receives the orders for what is needed for the day. The various foods are prepared and put in sterilized bottles. Each bottle carries the number of the child for which it is intended. The service is carried on by nine nurses, a chief nurse, four day and two night nurses, and two nurses managing the milk kitchen.

Systematized Boarding Out Versus Institutional Care for Infants and Young Children. Henry Dwight Chapin, M. D. New York Med. Jour., 1917, CV, No. 22.

Dr. Chapin attributes the admittedly heavy morbidity and mortality in institutions for children to two factors: (1) lack of individual care; (2) lack of fresh air. The lack of care is especially evident at night, for there is rarely, if ever, a sufficient number of nurses to give the constant attention needed by acutely sick babies. "A restless, uncomfortable night," he says, "will undo the work of many days of care in feeble infants." The cubic air space is usually insufficient in institutions, and the collection of many infants in one room, even though large, is undesirable.

Properly regulated boarding out—a plan which must not be confused with boarding out in all kinds of homes with little or no oversight—Dr. Chapin believes to be by far preferable to institutional care. The home must be carefully selected and the doctor and nurse kept in constant touch with the case. The baby should receive the amount of personal care and attention which a well-cared-for child receives in its own home. The Speedwell Society which has worked for fifteen years at Morristown, N. J., boards out infants in units which allow intensive working in small fields. The mortality of atrophic babies under 6 months of age, nearly all of whom, Dr. Chapin says, would have died if kept in an institution, has been, under the auspices of the Speedwell Society for the last three years, but 16 percent. The mortality of all cases, including many older children, was 2.5 percent. A comparison between institution and boarding out mortality is afforded also by the results obtained by the Sage Foundation and the New

York Department of Health with marasmic babies in the ward of the New York Foundling Hospital that receives only chronic cases of extreme atrophy, which have always ended in death. An extra bonus of five dollars a month was given to selected women to care for a number of these babies. A doctor and nurse were furnished for every ten babies. A few infants were returned to the hospital, but 89 remained in the individual homes with a mortality of 46 percent.

Dr. Chapin quotes another experiment in San Francisco. The mortality in the foundling asylums of that city is said by Holsclaw and Rood to have been 50 percent. Carefully systematized boarding out of the same class of cases has resulted in reduction of the mortality to 12 percent. Comparable results are reported from the children's department of the Massachusetts General Hospital. In this case, however, the infants were not boarded out, but supervised in their own homes.

Among the advantages of boarding out are the following: The danger of spreading communicable diseases is reduced to a minimum. The infants in boarding homes are stronger than most of those who are retained long in institutions, even if the latter are free from disease. Boarding out is cheaper in operation, besides giving better results. The money locked up in the original cost of an institutional plant must be added to the cost of operation, and likewise the remission of taxes is made up by the community at large in the shape of additional taxation. The home, poor and imperfect though it may be, is better in the long run for the little child than the institution.

Dr. Chapin remarks incidentally that the sum of ten dollars a month commonly paid to women who receive children boarded out is too small for favorable results. It is not right, he says, to exploit poor women in applying the system.

The Care and Treatment of the Insane in the County Institutions of Pennsylvania. William C. Sandy, M. D. Mental Hygiene, 1917, I, No. 2.

A survey of the institutions caring for the insane in Pennsylvania, made in 1914 for the Mental Hygiene Committee of the Public Charities Association of Pennsylvania by Dr. C. Floyd Haviland, King Park, New York, State Hospital, discovered amazing neglect and many distressing conditions. An effort on the basis of Dr. Haviland's report to secure legislation for abandoning county care in favor of an efficient system of state care failed. The Public Charities Association in 1916 requested the National Committee for Mental Hygiene to make another survey of county asylums. This survey was made by Dr. Sandy, whose article in Mental Hygiene is a summary of his report on the subject. Dr. Sandy summarizes the requirements of a modern hospital for the insane as follows:

1. Properly designed and equipped buildings, insuring enough day and night space, sufficient sanitary toilet and bathing facilities, adequate fire protection, heating, water and light facilities, a sewage disposal plant, culinary and service departments, with a modern business system of administration.

2. In the buildings, wards or units sufficient to permit proper separation of the different classes of the insane, with provision for the reception of new patients, the isolation of the tuberculous, the infirm and sick, the noisy, violent, destructive, and untidy, the working, clean, and chronic, and the convalescent.

3. A medical superintendent experienced in diagnosis, treatment and care of the insane, and possessed of executive ability.

4. A sufficient medical staff to insure individual attention to the patients.

5. Frequent staff conferences, presided over by the superintendent or some other competent physician, at which all patients may receive consideration as to diagnosis, treatment, and other matters of importance.

6. Thorough mental and physical examination of each patient, and complete records.

7. A well-equipped laboratory with a trained pathologist.

8. Equipment for hydrotherapy, electrotherapy, dentistry, general and special surgery, and special examinations, such as that of the eye.

9. A sufficient number of nurses and attendants, a good training school for nurses and competent supervisors.

10. One or more full-time instructors in diversional occupation and sufficient land to afford outdoor occupation in the form of farm and garden work.

11. A field or social worker for prevention and after-care work.

12. Clinics conducted by the members of the medical staff in the interests of prevention.

The physical conditions found in county institutions for the insane in Pennsylvania were satisfactory in extremely few instances. The plans evidence no thought that the buildings were to house the sick. In some buildings there was wasteful extravagance and stained glass windows and lavish use of gold leaf and marble. In others there was a painful lack of sufficient sanitary and comfort arrangements. Some of the county institutions had so few wards that it was impossible to separate properly the different classes of patients. Fire protection in most cases had been given little or no careful attention. In a number of institutions the amount of water available was much too small and the pressure too low for fire protection purposes. In some cases the water was subject to surface contamination. Bathing facilities were inadequate in many cases.

In county institutions it is quite the rule for the insane to be entrusted to the care of laymen, usually without any previous experience. The medical attention is usually meager and most superficial. An illustrative case is cited of a patient unable to speak English, who, on being examined by a recently appointed superintendent, was found to have given no trouble and no indication of mental abnormality. Questioned by an interpreter, the patient talked rationally. He had not realized where he was; he thought he was serving time in a penal institution for some offense of which he had no knowledge, and when his time was up he would be allowed his freedom. Such an instance of unjust confinement could not have occurred in a modern hospital, where the patient would have received a thorough physical and mental examination on admission, and the circumstances of his commitment investigated, if necessary, by the social worker.

Most of the institutions are without even primitive facilities for laboratory tests not only for mental diseases, but also for ordinary physical ailments. Facilities for dental work and electrical diagnosis and treatment are generally lacking. Too few attendants are provided in practically all of the institutions. In only a few can there be said to be nurses employed. In only four of the institutions are there training schools for nurses.

Only three of the institutions are provided with special instructors for diversional occupation. Only one institution is now providing after-care. None of the counties has instituted any plan looking toward prevention. Dr. Sandy observes in conclusion that the outstanding impression left is that of total lack of standardization of both equipment and methods.

QUERIES AND ANSWERS

Educating a Community

To the Editor of THE MODERN HOSPITAL:

Our county seat has three so-called hospitals, which are really only boarding houses for the sick; there are several thousand mine workers in the county, and a good hospital is needed. The people are not interested because bad methods have been used for personal gain in the present hospitals. Can you suggest a remedy?

AN IOWA WOMAN.

We want to advise you that you have a problem contemplating the education of your people. The best thing to do is for you to get hold of your county or town newspaper, tell the editor what you think you need and ought to have, and why; show him in detail the inefficiency of your present hospitals, and suggest to him a propaganda or campaign for better hospital facilities in the community. Watch your opportunity and get hold of all sorts of details of mismanagement and of instances in the community where a good hospital would really be an asset to the people; for instance, there are many chronic individuals walking your streets, men and women, who could be cured in an up-to-date, well-equipped, well-manned hospital. Crooked limbs, disfiguring, distorting scars from burns, cross-eyes and poor vision that could be cured, blindness from cataract, pot-bellied child-bearing women, whose condition is due to gynecologic mismanagement, and a thousand and one other evidences of professional neglect in the community due to the absence of a stimulating workshop for the doctors, a place in which the men would be compelled to keep up in their literature and where they would have an opportunity to become skilled in surgery and in the technical branches of medicine. If you can get such a campaign as this going you will soon find a demand in the community for a good hospital, and with that demand you will find a ready response.

In Children's Dining Rooms

To the Editor of THE MODERN HOSPITAL:

Kindly give us your advice as to the best kind of table covering for use in an orphans' home where the children's ages range from 2 to 5 years; eight children at a table and about eight tables in the dining room.

Oilcloth is not satisfactory. White paint needs to be constantly renewed, and table cloths are about impossible because the children are so small and there are two sittings. Is Vitrolite practical for the hard usage which would be given it?

Any suggestion you may offer will be very much appreciated. A JEWISH ORPHAN ASYLUM.

We find it difficult to give a satisfactory reply to your question. Oilcloth has seemed the satisfactory table covering in many institutions, but personally we are very strongly opposed to the use of anything so cold and uninviting, especially for children.

It seems to us that if we are to undertake to raise orphans we ought to make the home as attractive, inviting, and cozy as can possibly be. The Jewish people of Chicago have been discussing for a long time the advisability of doing away with orphan asylums and placing the children in private homes. This is partly in order that they may be surrounded by a homelike atmosphere. A bare table or an oilcloth in the dining room is not in keeping with this humane and very proper sentiment. It seems to us that you could get some heavy but inexpensive linen or cotton table cloths and they would certainly be far preferable to anything that you could use. Vitrolite or anything of that sort would be impracticable because the dishes would break and the use of enameled ware dishes is not in keeping with the principle of surrounding the children with refining home influences. We think you had much better get table cloths.

Hospital Construction Today

To the Editor of THE MODERN HOSPITAL:

We have plans in our office for the construction of a reinforced concrete hospital building, the erection of which is being held up by the building committee, who think that by deferring the erection for a while they will be able to let the contract for less money than they can at this time.

As we want to give our clients the best information obtainable, and the best advice that we can, we are writing to ask you, as being in a position to give us an intelligent and unbiased opinion, to reply to the following questions?

1. Do you think it advisable to build now, or to defer building for a while?
2. Whether you think it wise to wait or to build, will you please state your reasons for your opinion?
3. How long do you think the present prices will be maintained?
4. Do you think there will be an upward tendency in prices, or not?
5. Will you kindly give any further suggestions?

A SOUTHERN ARCHITECT.

1. We think it advisable to defer building for the time being.

2. The reason is that materials are prohibitive in price and almost impossible to get.

3. We think that present prices will be continued for the period of the war.

4. We doubt whether prices will go much higher, because there is an evident intention on the part of the government to control prices in all directions, and this tendency is likely either to stabilize prices by voluntary action on the part of those making them or to result in throwing merchantable commodities under the direct control of the government, where prices will be cut to legitimate points.

5. There is no legitimate reason for many high prices now asked for many construction materials, excepting a general feverish business feeling throughout the country and a nervousness on the part of business men as to the future. We think this nervousness entirely unjustified by the business situation and it should correct itself at least in part in the near future and be entirely relieved at the end of the war.

A Philadelphia physician, in declaring that insanity was frequently productive of sound logic tempered with wit, told the story of a patient he once met in an asylum.

He came across this patient while strolling through the grounds, and stopping, spoke to him. After a brief conversation on conventional topics, the physician said:

"Why are you here?"

"Simply a difference of opinion," replied the patient. "I said all men were mad, and all men said I was mad—and the majority won."—Lippincotts.

LETTERS TO THE EDITOR

Printed Forms to Prevent Waste of Food

To the Editor of THE MODERN HOSPITAL:

I am inclosing some printed forms which I am using in this hospital to prevent the wasting of food, common to a great many hospitals. The whole scheme is based on the assumption that food served to patients in the hospital is not to be used over again.

On account of the fact that these forms do not speak for themselves, I will endeavor to explain each one as concisely as possible:

Form 1 is the blank which the dietitian takes around to the patients to get their order for the meals.

Form 2 is the blank on which Form 1 is summarized.

Form 3 (page 380), "Classification of Foods," is a form classifying different articles of food and listing them so that they may be ordered by symbols, thus saving stationery and time.

These forms are the result of observations which I have made—namely, that there are a certain percentage of patients who do not eat meats, others who do not eat potatoes or certain other kinds of vegetables, others who do not eat bread or butter, and so on.

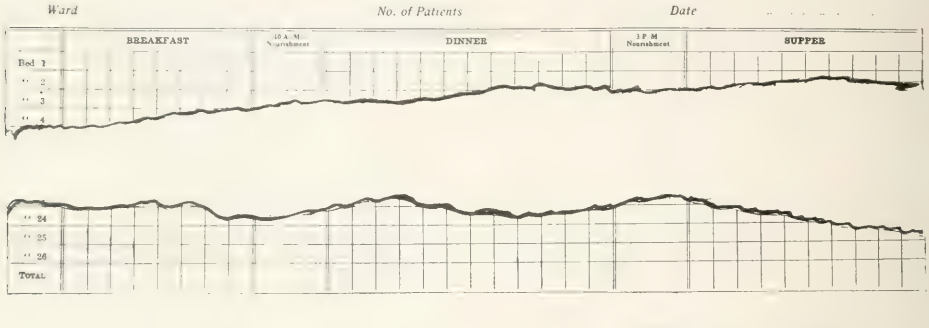
In carrying out this routine we make out a menu sheet, placing after each article of food on the menu the classification symbol. I am also inclosing a copy of one of these menus.

I have had this system in operation only a very short time, but long enough to know that it is effecting a saving.

Very truly yours,

H. T. SUMMERSGILL, Superintendent.

UNIVERSITY OF CALIFORNIA HOSPITAL

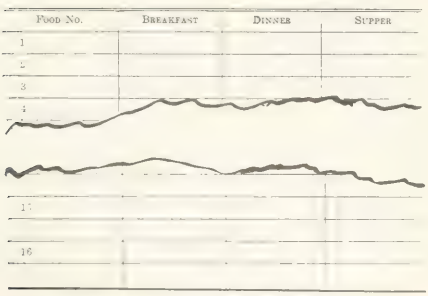


Form 1. Order blank which the dietitian takes around to the patients to get their order for meals. The original sheet is 8½ by 11 inches.

UNIVERSITY OF CALIFORNIA HOSPITAL

DIET ORDER FOR WARD

Date



No. of Patients

No. of Patients on Full Diet

No. of Patients on Soft Diet

No. of Patients on Liquid Diet

No. of Patients on Special Diet

, Head Nurse

Dietitian

Form 2. Form on which the order blank [illegible] The original form is printed on a [illegible]

MENU SHEET USED IN CONNECTION WITH THE SYSTEM OF PRINTED FORMS, UNIVERSITY OF CALIFORNIA HOSPITAL

MENU FOR PATIENTS—THURSDAY, OCTOBER 4, 1917

Breakfast:	
Oatmeal	9
Milk for same	6
Sugar for same	7
Eggs	10
Toast	1
Butter	2
Coffee	3 a
Milk	3 b
Milk for coffee	4
Sugar for coffee	5
Dinner:	
Soup	13
Roast lamb	11 d
Mashed potato	14 i
Beets	14 c
Blanc mange	16 h
Bread	1
Butter	2
Tea	3 c
Milk	3 b
Milk for tea	4
Sugar for tea	5
Supper:	
Fillet of sole	12 f
Rice	9 e
Canned pears	9 k
Bread	1
Butter	2
Tea	3 c
Milk	3 b
Milk for tea	4
Sugar for tea	5

The man who is indispensable owns the situation. In the long run every man gets in life about what he deserves. The vision of truth embraces many things which the objector will not see. The objector makes *what he desires* for what he deserves.—Haddock.

UNIVERSITY OF CALIFORNIA HOSPITAL

CLASSIFICATION *of* FOODS

FOR FULL AND SOFT DIETS

1. **Bread**
2. **Butter**
3. **Beverages**
   - *a.* Coffee
   - *b.* Milk
   - *c.* Tea
4. **Milk for Coffee or Tea**
5. **Sugar for Coffee or Tea**
6. **Milk for Cereal**
7. **Sugar for Cereal**
8. **Fruits**
   - *a.* Apples
   - *b.* Apricot
   - *c.* Berries in Season
   - *d.* Cantaloupe
   - *e.* Cassava Melon
   - *f.* Cherries
   - *g.* Figs
   - *h.* Grapefruit
   - *i.* Oranges
   - *j.* Peaches
   - *k.* Pears
   - *l.* Prunes
   - *m.* Rhubarb
9. **Cereals and Cereal Products**
   - *a.* Oatmeal
   - *b.* Rolled Oats
   - *c.* Cornmeal
   - *d.* Hominy
   - *e.* Rice
   - *f.* Spaghetti
   - *g.* Macaroni
10. **Eggs**
11. **Meats**
    - *a.* Bacon
    - *b.* Roast Beef
    - *c.* Roast Mutton
    - *d.* Roast Lamb
    - *e.* Roast Veal
    - *f.* Roast Chicken
    - *g.* Smoked Beef
    - *h.* Boiled Beef
    - *i.* Boiled Mutton
    - *j.* Boiled Ham
    - *k.* Boiled Tongue
    - *l.* Beef Stew
    - *m.* Mutton Stew
    - *n.* Veal Stew
    - *o.* Chicken Fricassee
    - *p.* Breasts of Lamb
    - *q.* Chops
    - *r.* Steaks
    - *s.* Hash
    - *t.* Brains
    - *u.* Chili Con Carni
    - *v.* Frankfurters
    - *w.* Liver
    - *x.* Kidneys
12. **Fish**
    - *a.* Baracuda
    - *b.* Codfish
    - *c.* Fresh Cod
    - *d.* Clams
    - *e.* Crabs
    - *f.* Fillet of Sole
    - *g.* Finnan Haddie
    - *h.* Fish Chowder
    - *i.* Halibut
    - *j.* Oysters
    - *k.* Salmon
    - *l.* Striped Bass
13. **Soups**
14. **Vegetables**
    - *a.* Artichoke
    - *b.* Asparagus
    - *c.* Beets
    - *d.* Carrots
    - *e.* Cauliflower
    - *f.* Corn
    - *g.* Onions
    - *h.* Peas
    - *i.* Potatoes
    - *j.* Spinach
    - *k.* Sprouts
    - *l.* Stringbeans
    - *m.* Squash
    - *n.* Tomatoes
    - *o.* Turnips
15. **Salads**
    - *a.* Lettuce
    - *b.* Vegetable
    - *c.* Potato
    - *d.* Egg
16. **Deserts**
    - *a.* Bread Pudding
    - *b.* Tapioca Pudding
    - *c.* Rice Pudding
    - *d.* Cottage Pudding
    - *e.* Gelatins
    - *f.* Ice Cream
    - *g.* Custard
    - *h.* Blanc Mange

Form 3. Classification of foods used at University of California Hospital (page 380). The original chart is 9¼ by 13½ inches.

NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.
Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

New Syringes

Two new splendid additions have been made to the Asepto type of syringes.

Syringe No. 206-L is for applying the Carrel-Dakin solution whenever the large apparatus is not necessary, and for keeping the drainage open. Dr. A. Carrel describes and recommends the syringe on page 115 of his booklet ("Treatment of Infected Wounds," British edition). The syringe can be used as an ulcer and dressing syringe, and by putting a soft rubber tip over the end, it is available as an eye, ear, and urethral syringe. It has a capacity of ½ ounce.

Syringe No. 206-H has proved very useful in the operating room, ward and private practice. The syringe can

Asepto syringe, 206-L.

be promptly filled and emptied in one pressure, and only one hand is needed. Both syringes have the patented bulb, which prevents the fluid from flowing into the bulb. Syringe No. 206-H has a capacity of 1 ounce.

Both syringes were demonstrated at the meeting of the American Medical Association, New York City, and the meeting of the American Homeopathic Association, Rochester, N. Y., and found universal approval. The syringes are being used by the Rockefeller Institute for Medical Research in the demonstration of war surgery.

The Hygeia Nursing Bottle

For a mere man to write of how a baby should be nursed is a more difficult task than it may appear, especially writing to readers of a journal who are for the most part professionals and who no doubt have forgotten more about the subject than the editor of this department will ever be able to learn; therefore, he will not talk about how the operation should be accomplished, but will simply call their attention to the construction of a nursing bottle, which seems to him, from a mechanical point of view, about the most practical and sanitary of the endless variety of bottles which have been devised for this purpose and which have come to his attention. The most appealing feature in this nursing bottle is the ease with which the food cell may be cleaned; no brush is required—the fingers can reach every part of the cell.

The Hygeia tube nursing bottle consists of one tube and two so-called breasts. When the breast at one end of the tube is turned inward it forms the base of the nursing bottle. The nipple at the base may be punctured or not, as preferred. When the nipple is perforated, air enters the base of the bottle and nursing is not obstructed by air entering the bottle through the nipple in use by the baby.

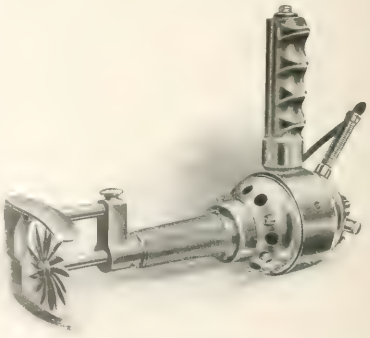
The Hygeia nursing bottle and its component parts.

The inventor claims that this makes nursing easier for the child, and if there is any leakage it can be prevented by placing a bit of non-absorbing cotton within the nipple. When the breast at the top gives out, it may be placed at the base, thus giving one a fresh nipple for the top.

This nursing bottle is made in two sizes, namely, in 8-ounce and 10-ounce capacity. Both food cells are made of the same diameter, consequently the breast nipple will fit either size.

The Moering Plaster Cutter

This plaster cutter is of the electrically operated variety and is of unusually good construction. The motor is of the universal type, very powerful, and, on account of the convenient method of holding, can be applied with the greatest ease. A substantial and well-designed hand hold is so placed that the cutter is always in view of the oper-



The Moering electrically-driven plaster cutter.

ator. Directly attached to the motor shaft is a series of knives of such design that the cutting is clean, and there is no possibility of the knives being filled with plaster. The guard is narrow, so as to permit easy introduction. When a cast is to be removed the guard is slipped under the

plaster, the motor started by means of a push button at the top of the hand grip, and the cutting will be done with surprising speed.

Aside from the time gained from removing cast, there is a decided advantage by the use of the Moering cutter, when a cast is to be preserved for the purpose of making a model. The narrow cut does not injure the shell, as in the case of some of the hand-operated instruments. The motor is universal and will therefore operate either on alternating or direct currents.

The Sarco Temperature Regulator

To control the temperature of liquids, as water for baths, pasteurizers, normal saline solutions, abdominal and other irrigation, infant and pathological incubators, etc., by entirely automatic means, has in the past offered in many cases a hard problem to solve. These difficulties are quite generally recognized by those who have had experience in the use of such regulators. Briefly, the trouble in many cases has been due to the use of mercury, which emulsifies any metal parts, packings which deteriorate, springs which require frequent attention, or where air is used, leakage, etc. There are, of course, successful regulators making use of the foregoing methods, but the perfect ones are few.

Fig. 1. Sarco regulator for tanks, containers, etc.

The system employed in the construction of Sarco regulators seems to be trouble-proof and at the same time permits of extremely accurate control. Fig. 1 illustrates the Sarco regulator for tanks, containers, etc. Fig. 2 shows connections as they would be made by installing the regulator for heating liquids by means of steam coils. The construction of the regulator is indeed simple.

If a metal cylinder completely filled with oil is hermetically sealed and then heated, the oil will expand with such great force as to split the cylinder. This enormous pressure is utilized in the Sarco temperature regulator. Referring to the illustration below, the oil cylinder communicates through a pipe with another cylinder in which there is a piston, the entire system being completely oil-filled. The piston in the piston cylinder actuates a valve. If the oil cylinder is immersed in a tank containing the fluid, temperature of which is to be regulated, and the

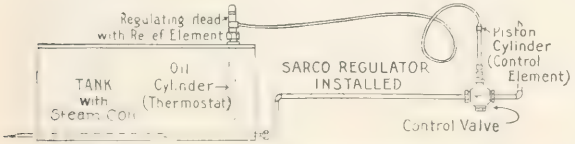


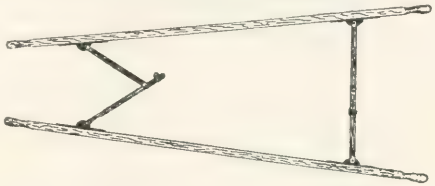
Fig. 2. Showing Sarco regulator connected with water tank.

tank is heated, say, by a gas flame, the supply of gas to which is regulated by the supply valve, the mode of operation is obvious. When the temperature of the tank liquid rises, heating the oil in the oil cylinder, the expanding oil pushes the piston outward in its cylinder and closes down the supply valve, thus reducing the gas flame. If on the other hand, the tank temperature falls, the oil in the cylinder cools and contracts, thus allowing the piston in the piston cylinder to go back, opening the supply valve and thus turning the gas flame higher.

There are other mechanical parts which are necessary to the perfect operation of the regulator, all of which are explained in minute detail by the manufacturer.

A Bed Carrier

A simple and convenient device for lifting patients in their beds, by which two men can do the work which otherwise would require four, is described in a recent number of the *British Medical Journal* by A. Geoffrey Evans, temporary surgeon, R. N., of the R. N. Hospital, Mount Stuart. It consists of two stretcher poles, each measuring 104 by 1¼ by 2½ inches, the ends shaped into handles. Two jointed flat iron bars connect the two poles, to which they are attached by hinges, at distances from the ends of the poles corresponding with the head and foot of the bed. One section of each bar overlaps the other section from the



Bed-carrier described by Surgeon Evans of the British Navy.

central joint, this longer section being turned over at the end to grip its fellow, thus preventing overextension. When in use the carrier, with jointed bars extended so as to prevent the poles from meeting or approaching, lies under the bed frame. Four buttresses on the poles rest hard against each leg of the bedstead to prevent the bed from slipping when it is carried up an incline. The bedsteads with which this device is used are light, of the ordinary hospital pattern, measuring 6 feet 4 inches by 3 feet 3 inches. Mr. Evans makes no claim to originality in this contrivance, but calls attention to it because of its originality.

Labor-Saving Machines

A type of labor-saving machine, which has for some years found favor, especially in large restaurant kitchens and other establishments where a great many people have to be fed, and whose merits have perhaps not been sufficiently appreciated by hospital and sanatorium managers, is the vegetable-paring machine. The Imperial Machine Company has recently brought out a new type, under the name of the "Victoria," as illustrated below, which seems especially suitable for use in smaller institutions since the scarcity of labor is becoming more generally felt and the cost of vegetables continually increasing.

This machine is adapted to the purpose of peeling, cleaning, and washing nearly all kinds of vegetables, such as white or sweet potatoes, carrots, turnips, beets, and parsnips, in large or small quantities, at the rate of about a bushel a minute with the larger-size outfits. These machines are made in several sizes and are adapted for direct electric drive belt or hand power. The special advantages claimed by the manufacturers for this machine are: great reduction of waste in vegetables and practical elimination of human labor in the handling of the vegetables, thus preventing any possible contagion. The peeling is done by a centrifugal process and friction inside of a cylinder, which is lined with carborundum fused with the metal,

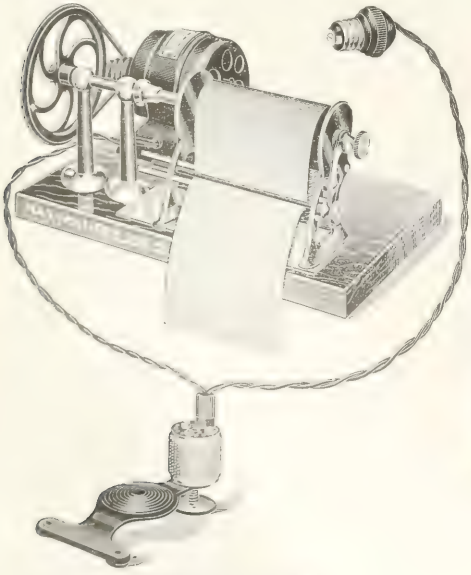
while being sprayed with water, which carries off the refuse to the sewer. The mechanism of the machine, consisting of such parts as bearings, steel shafts, and gears,

Victoria vegetable peeling machine.

is all enclosed in a water-tight compartment, which is filled with oil and grease, and the inventor claims that the machine is practically indestructible.

Electrical Bandage Roller

This device has been put on the market under the trade name of the Hoffman Blue Cross Electric Bandage Roller. The outfit is operated by a small electric motor, and can be



Electrical bandage roller.

used on either the 110-volt direct or alternating current. It is small in design, measuring 15 inches wide, 15 inches deep, and 7½ inches high. The motor is operated with a foot switch, and can be stopped instantly. The bandage roller is connected with the motor by a small line shaft. This apparatus is adjustable, so that any width of bandage from 1 to 9 inches can be wound. The work can be done very efficiently, and more expeditiously by the use of this machine than by hand, and it should commend itself as a labor-saving device.

New Burdick Heat Applicators

The rapidly growing interest in the use of light and heat for both local and general applications has led to the development of a new line of applicators, adapted to most approved methods of technic. In designing the new series of applicators, the following specifications were carefully adhered to: 1, all electrical construction to comply with the

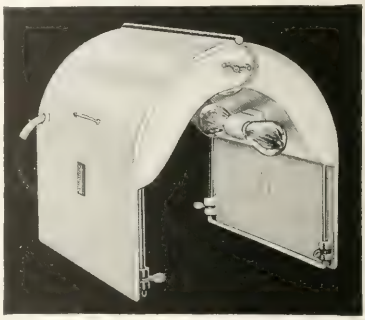


Fig. 1. Type G applicator.

latest code of the National Board of Fire Underwriters; 2, abundant thermal insulation for protection of both patient and operator; 3, construction to be light in weight, making the applicators easily portable, yet strong and durable; 4, electrical control to provide for wide range of temperatures measured by a high-grade standard thermometer, as required for varied methods of technic; 5, adjustability in height and width for use on a wide bed or narrow treatment table, and for handling large or small patients, etc.; 6, the construction to provide for suspending the applicator over the hospital bed, or for collapsing it into a small package when not in use.

Fig. 2. Type P applicator used to relieve a case of bronchitis.

Type G is intended, primarily, for continuous general applications of moderate temperatures. The purpose of this applicator is for combating subnormal temperature associated with surgical shock and other debilitating con-

ditions, maintaining a general persistent hyperemia, assisting in the healing of wounds, increased skin elimination, etc. The Anderson tubular ball-bearing hinge is used in Types G and I, which insures easy adjustments, with unusual strength and durability. It can be expanded to full width of the bed, or narrowed to 22 inches in width for use on a treatment table. When desired, the lighting power and temperature can be run up to maximum requirements for baking and sweating effects.

Type I is intended for making intensive applications to the various sections of the body, as pelvis, chest, hips, knees, etc., or for the prolonged moderate applications. The principle of construction is the same as in Type G; the applicator is adjustable for setting astride the body of a large person or for treating a knee or ankle joint, etc. The control provides for a range of heat from "continuous mild" to the most intensive applications.

Type P takes the place of hot-water bottles, electric pads, etc., for making local applications. It is light to handle, has thermal insulation for protection of patient and bedding, and has a cut-off switch in cable, easily accessible to either patient or attendant.

The combined series provides a means of bringing phototherapy and thermotherapy into practical hospital use in their broadest sense and at a moderate cost.

Folding Baby Dressing Table

The little baby dresser illustrated here has recently been submitted for our inspection. This device is substantially made of steel, white enameled, and is supplied with solid rubber-tired wheels. The little table is well balanced, and, when securely locked, is very rigid and cannot be tilted over. The size of the top is 32 by 19 inches, and is made of strong leatherette, which can be easily kept clean. We think that this table will especially appeal to nurses for use both in institutions and in the home, as it can be folded up and put out of the way when not in use.

Fig. 1. Folding baby dressing table, open.

Fig. 2. Folding baby dressing table, closed.

Description of the Barrack-Tent (Patented), With a Dismountable Floor of the Mobile Surgical Ambulance of the Army

The barrack-tent described by G. Marcovigi (Riv. di ingegneria san.) consists essentially of a wooden framework, a floor of boards with tongue and groove covered with linoleum and a double covering of impermeable tent-cloth forming the walls and the roof. Each barrack-tent is 15 meters long and 5 meters wide, and has three cloth-covered doors and four windows. The floor is formed by 36 boards (0.80x2.40 meters) provided with tongue and groove. The inside as well as the outside of the walls and roof is lined with a layer of tent-cloth so that the framework is between the two layers. The frame and the floor can be dismounted in a very short time and loaded, together with the tent-cloth, on one specially constructed automobile truck.

It requires many faculties combined of observation and memory to speak "the whole truth," and to say "nothing but the truth." "I know I fibs dreadful; but, believe me, Miss, I never finds out I have fibbed until they tells me so," was a remark actually made. It is also one of much more extended application that most people have the least idea of.—Florence Nightingale, "Notes on Nursing."

BOOK REVIEWS

The Causes of Tuberculosis. Together With Some Account of the Prevalence and Distribution of the Disease. By Louis Cobbett, M. D., F. R. C. S., University Lecturer in Pathology, Cambridge. Pp. 707. Cloth, price $6.50. Cambridge University Press, 1917.

Public hygiene has come to play an important role in the consideration of the many subjects connected with public health matters. "The Causes of Tuberculosis" is essentially a volume addressed to those in the antituberculosis crusade from the standpoint of an experimental pathologist. The chapter dealing with the researches leading to the relation of animals to human tuberculosis is worthy of careful perusal and study. These researches, together with the researches of the Royal Commission on Tuberculosis and the Local Government Board in the County, the Department of Health of the City of New York, and the Imperial Board of Health in Berlin, are brought together in handy form. Many chapters are devoted to the tubercle bacillus and its varieties or types, their distribution, cultural characters, and comparative virulence for a number of animal species. Chapters 4 and 5 consider "Soil and Seed," the importance of individual predisposition and opportunities for infection. Evidence of an experimental kind is brought forward to establish the importance of the quantity of the bacillus in an infecting dose. Chapters 18 to 23 treat of tuberculosis in animals. The resistance of the different species of animal in histological response to invasion by the tubercle bacillus is pointed out. Study is made of the special types of bacillus found in instances of naturally acquired tuberculosis in each animal species, and the susceptibility of that species to infection with each of the three types as shown by artificial experiment. The book, we believe, will receive a welcome from those who have at heart the victory over disease. The author's labors will stimulate a more general interest in the fundamental problems concerning the most important disease affecting mankind, the one disease presenting the greatest number of complex, economic, and social problems. The Cambridge Health Series should appeal strongly to many various classes of readers. This volume should be in the hands of all medical officers of health, sanitary inspectors, teachers, and administrators as well.

CLARENCE L. WHEATON, M. D.

The *Tatler* tells the story of an old Scotchman whose wit was edged with pessimism. One morning he met at her gate a neighbor whose husband was seriously ill.

"And hoo's yer husband this morning, Mrs. Tamson?" he asked solicitously.

"Oh, he's awful bad! The doctor said his temperature has gone to 150."

"Nae, nae, you've made a mistake! Sandy's temperature could never be as muckle as 150—at least, not in this world," he added as an afterthought.

BOOKS RECEIVED FOR REVIEW

Society and Prisons. By Thomas Mott Osborne, L. H. D. Pp. 246. Cloth, price $1.35 net. Yale University Press, New Haven, 1916.

Society's Misfits. By Madeleine Z. Doty. Pp. 255, with 16 illustrations. Cloth, price $1.35 net. The Century Company, New York, 1916.

Alienists and Neurologists of America. Proceedings of Sixth Annual Meeting. Dr. Bayard Holmes, Secretary and Editor. Pp. 212. Published by the Society, Chicago, August, 1917.

Obstetrics for Nurses. By Charles B. Reed, M. D., Obstetrician to Wesley Memorial Hospital, Chicago. Pp. 374, with 130 illustrations. Cloth, price $2.50. C. V. Mosby Company, St. Louis, 1917.

Lest We Grow Hard. By E. F. Russell, M. A. Addresses and Papers on Spiritual Subjects in the Service of the Guild of S. Barnabas for Nurses. Pp. 234. Paper, price 40 cents net. Longmans, Green & Co., New York.

The Child in Health and Illness. By Dr. Carl G. Leo-Wolf, with an Introduction by Dr. Peter W. Van Peyma, Clinical Professor of Obstetrics, University of Buffalo. Pp. 288, with 68 illustrations. Cloth, price $2 net. George H. Doran Company, New York.

The School Nurse. By Lina Rogers Struthers, R. N., Chairman of School Nursing Committee of the National Organization of Public Health Nursing, 1913-1916. Pp. 293, with 24 illustrations. Cloth, price $1.75 net. G. P. Putnam's Sons, New York, 1917.

A Textbook of Anatomy for Nurses. By William Gay Christian, M. D., Professor of Anatomy, Medical College of Virginia, Richmond. Pp. 222, with 34 original illustrations, 5 of which are in colors. Cloth, price $1.75. C. V. Mosby Company, St. Louis, 1917.

Health in the Camp. A Talk to Soldiers. By H. R. Kenwood, Temporary Lieutenant-Colonel, R. A. M. C.; Professor of Hygiene and Public Health in the University of London, etc. Pp. 58. Paper, price 15 cents. The MacMillan Company of Canada, Ltd., Toronto, 1916.

War-Shock. The Psycho-Neuroses in War Psychology and treatment. By M. D. Eder, B. Sc. (London), M. R. Cs., L. R. C. P., Temporary Captain and Medical Officer in charge of Psycho-Neurological Department, Malta. Pp. 154. Cloth, price $1.75 postpaid. P. Blackiston's Son & Co., Philadelphia.

The Jolly Book of Playcraft. By Patten Beard, author of "The Jolly Book of Boxcraft," "Marjorie's Literary Dolls," etc. Pp. 227, with 61 illustrations arranged by the author and photographed by G. S. North, and with 29 diagrams. Cloth, price $1.50 net. Frederick A. Stokes Company, New York, 1916.

Massage. Its Principles and Practice. By James B. Mennell, M. A., M. D., B. C. (Cantab.), Etc., Medical Officer, Physico-Therapeutic Department, St. Thomas' Hospital; Civilian Medical Officer in charge of the Massage Department, Military Orthopedic Hospital, Shepherd's Bush. With an Introduction by Sir Robert Jones, C. B., F. R. C. S., Colonel R. A. M. C., Inspector of Military Orthopedics. Pp. 358, with 135 illustrations and an appendix. Cloth, price $3 net. P. Blackiston's Son & Co., Philadelphia.

Preventive Medicine and Hygiene. By Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard; Director of the School for Health Officers of Harvard University and the Massachusetts Institute of Technology; Formerly Director of the Hygienic Laboratory, U. S. Public Health Service, etc. With chapters upon Sewage and Garbage, by George C. Whipple, Professor of Sanitary Engineering, Harvard; Vital Statistics, by John W. Trask, Assistant Surgeon-General, U. S. Public Health Service; Mental Hygiene, by Thomas W. Salmon, Medical Director, National Committee for Mental Hygiene, etc. Third Edition, containing a special section on Military Hygiene. Pp. 1,374, with illustrations. Cloth, price $6.50. D. Appleton & Co., New York, 1917.

WHAT OHIO IS DOING AGAINST TUBERCULOSIS

Close Cooperation of Official and Unofficial Bodies—Work of State Bureau of Tuberculosis Hospital—Admissions and Discharges

No claim is made, says the Ohio Society for the Prevention of Tuberculosis in a recent publication, that tuberculosis work in Ohio has been developed along original lines or that it is further developed than in other states. The society does put forward the claim, however, that the record of close cooperation between an official body, the Ohio State Board of Health, and an unofficial body, the Ohio Society for the Prevention of Tuberculosis, in the gradual development of the necessary machinery with which to combat tuberculosis, covering as it does, seventeen years, is without parallel in the United States. The state's equipment for the fight against tuberculosis includes a division of public health education and tuberculosis under the state board of health, fourteen institutions in which tuberculosis may be treated, sixty-eight public health organizations, and sixty-eight nursing centers, employing a total of 463 nurses. The fourteen institutions for the reception and treatment of patients represent seven types: a state sanatorium, two municipal sanatoriums, three county hospitals, four district hospitals, one semipublic sanatorium, one private sanatorium, and one general hospital with a tuberculosis ward.

An important feature of the antituberculosis work of Ohio is the state bureau of tuberculosis hospital admissions and discharges, which is under the state board of health and to which ten of the tuberculosis hospitals belong. Blank forms for notification of admission and discharge are supplied by the bureau to the cooperating institutions. The notification of admission contains the hospital and state board of health case numbers, name of institution, patient's name, age, sex, color, social condition, nativity and length of residence, information about addresses and occupation, type of disease, number in family, existence of tuberculosis in the family or associates, previous sanatorium treatment, etc. The notification of discharge contains case numbers, name of institution, name, age, and home address of patient, cause of discharge, condition on admission and on discharge, condition of sputum, address to which patient is returning, name of prospective employer, and occupation, source of support, and patient's conduct in the institution.

Many uses are made of this mass of information. For instance, when the bureau receives a notification of admission of a patient from one of the eighty-six communities possessing public health nursing service, a copy of this notification is sent to the nurse, with a request for a report on the patient's family and home. In localities which have no public health nursing service the patients' families are visited by nurses on the staff of the division of public health education and tuberculosis of the state board of health. This service results in the detection of many cases which might otherwise remain unsuspected and untreated. The work of the bureau was described by Mrs. A. L. Mercer, of the Ohio State Board of Health, in a paper read before the last annual meeting of the National Association for the Study and Prevention of Tuberculosis, an advance proof of which was furnished THE MODERN HOSPITAL by courtesy of the *Journal of the Outdoor Life.*

Dr. Jose Y. Aragon, Magdalena, Cal., is opening a private hospital at that place.

SOME GREAT HOSPITALS OF AMERICA

British Types and New Departures as Described by the Editor of "The Hospital," London

On his recent visit to America, Sir Henry Burdett, the editor of *The Hospital*, collected some impressions of American hospitals which he has published in his journal and which are of interest to hospital administrators on this side. We reproduce his article below:

"It is not generally understood in this country that many of the older, and amongst them some of the best administered, hospitals of the United States were originally founded, and are still maintained, by funds, given for some or all the following purposes: endowment, site, buildings, equipment, maintenance. That is to say, there are a considerable number of hospitals in the United States which rely largely on voluntary gifts, or are maintained by funds presented by wealthy Americans and devoted to hospital purposes.

"The hospital idea has made great progress with the people throughout the United States during the last thirty, and especially in the last twenty, years. One of the most important influences for good in the hospital sense was the planning and opening of the Johns Hopkins Hospital at Baltimore, which is under the government of twelve trustees elected for life—a self-perpetuating body. The late Dr. John S. Billings was successful with his scheme and plans for this hospital, which were selected by the trustees after a limited competition. Dr. Billings, during his life, was the great hospital authority of the United States, and as his life, which we reviewed in *The Hospital* of June 19, 1915, p. 251, demonstrates, he was a man of fine character, fulness of knowledge, and rare ability. He was fortunate in having the cooperation of Dr. Henry M. Hurd as superintendent of the Johns Hopkins Hospital—a man of the quietest presence and most far-reaching influence which it has ever been our pleasure to meet.

"It is not necessary to describe in detail the wonderful completeness of the Johns Hopkins Hospital, closely associated as it is with the Johns Hopkins University. This hospital is unique in the circumstances of its original planning and creation, its splendid efficiency from its opening to the present time, and the object-lessons it affords to every visitor in proportion to the knowledge and experience of hospitals, and the treatment of disease, which each may possess. We gave a fairly complete account of its position, principal features, and excellence on page 339 *et seq.* of *The Hospital* for January, 1917. We will only repeat that we have often felt, and never more forcibly or certainly than during the visit of inspection we paid to this hospital on November 1, 1916, that no hospital administrator's or practitioner's education is complete until he has mastered the Johns Hopkins Hospital system and methods, and fully absorbed their atmosphere. As a pioneer of progress it has continuously fulfilled the objects which inspired its inception, which have been faithfully and exhaustively pursued and developed during the twenty-seven years of its existence. The superintendent, Dr. Winford H. Smith, is full of knowledge, his grasp of every detail is remarkable, and an inspection under his guidance yields continuous profit and pleasure.

"Most of the greater cities have interesting types of large hospitals, many of them affiliated to universities, or medical schools, or both, and the nursing organizations and training schools associated with them have done yeoman service in raising the standard of nursing and encouraging its development. They have secured a continuous growth in the quality of their nurses' education and class training, which constitute such predominant features in the best types of hospitals throughout the United States.

"Philadelphia has some thirty hospitals, of which the Pennsylvania Hospital, founded in 1751, contains most features of interest—an interest which is increased by the publication of 'The History of the Pennsylvania Hospital, 1751 to 1895,' by Thomas G. Morton, M. D., senior surgeon and president of the medical staff. This history contains many reproductions of ancient charters and documents of importance and value, as well as some excellent engravings, and constitutes altogether a book worthy of

preservation in the libraries of antiquarians, as well as of hospital men who take a wide interest in the history and development of the field of work to which they may devote their lives. Some of the old wards in the Pennsylvania Hospital have been cleverly converted or reconstructed, leaving many of the old features without interfering in any way with their hygienic and general efficiency for the accommodation and treatment of patients. The town hospital, an older establishment, contains 2,000 beds, with an average number occupied of 1,852; its expenditure is about £140,000 a year. In addition to several special hospitals there is also the hospital of the University of Pennsylvania, founded as recently as 1874, of which an Englishwoman, Miss Marion E. Smith, is the superintendent. It contains upwards of 400 beds, and has at present much accommodation for paying patients of the better class, which seems to be popular and is usually, we understand, fully occupied.

"New York is a great city for hospitals of all kinds, sizes, and qualities. The majority of them have been founded within the period—nearly fifty years—which has elapsed since the writer first became superintendent of a hospital. This fact is interesting as showing that the growth, improvement, and multiplication of hospitals dates from about the same period in the great cities of the United States and this country. The New York Polyclinic Hospital, with 205 beds, which is worked on the combined free and pay system, possesses features of interest. Its medical staff, for instance, consists of eighty-eight visiting physicians and surgeons, and forty-three specialists, in addition to resident surgeons. There is a good opening in New York for the provision of a modern, up-to-date hospital of the first rank, planned with infinite care and knowledge by the best authorities America contains, including Dr. S. S. Goldwater, superintendent of the Mount Sinai Hospital. Dr. Goldwater has spent a most useful and busy life; his knowledge of hospital construction and planning is exceptionally good, he has taken infinite pains to perfect his knowledge and mastery of hospital construction, administration, and everything calculated to benefit the citizens of New York hygienically, and to minister to their health, comfort, and wholesome, uplifting, and pleasurable existence. Dr. Goldwater's career, which is only now entering on what will probably prove to be its most interesting stage, is one worthy of study, because it is full of instruction for those who can appreciate good and thorough work, pursued with a single eye to securing the best and most efficient results, through municipal and institutional reform, under the control of men who have no axes to grind and are whole-heartedly desirous of securing the best possible results, at a reasonable cost, with the avoidance of waste and the absence of 'graft' of all kinds.

"Boston is a city full of interest, too, to all institutional and social workers of every type. England has learnt much and wisely from Boston institutions, and Boston has reciprocated the compliment, like many other American cities, by studying British and Continental methods and assimilating their best features when making developments for their own uplifting. The Massachusetts General Hospital, founded in 1811, decades of years before the majority of other hospitals were thought of, still maintains its supremacy and interest. Boston owes much, and many things, to the Massachusetts General Hospital, and under its skilled, active, and knowledgeable administrator, Dr. Frederick A. Washburn, it is extending and improving the character of its work, which cannot fail to prove of supreme interest to all hospital people the world over. The Massachusetts General Hospital owes much of its prosperity to the generosity of the citizens of Boston. Its close association with Harvard University did much to cement and develop the efficiency and reputation of its medical school.

"In recent years the Peter Bent Brigham Hospital has been established. It was founded by P. B. Brigham, who left the residue of his property in 1877 to accumulate, for twenty-five years from his death, in the hands of trustees, at the end of that period to be used in the founding of a hospital for the care of sick persons in indigent circumstances residing in the County of Suffolk. This led to prolonged discussion in the courts, which ended in March, 1911. Dr. J. S. Billings was engaged to give expert advice, a committee of experts was appointed, of whom he was one, six architects were invited to compete and present plans, and contracts for the construction of a hospital with accommodation for 200 patients were signed in August, 1911, and completed in July, 1913. Dr. H. B. Howard, formerly superintendent of the Massachusetts General Hospital, had been appointed superintendent in April, 1908, when he visited Europe, and the hospital buildings were erected largely under his supervision and control. We published an illustrated account of this hospital in our issue of December 30, 1916, pp. 261-263. It is closely associated with Harvard University and the widespread popularity and great experience of Dr. Howard have brought it prominently into notice, while special points in its construction have led to interesting discussion and are still under trial. Both the Massachusetts General and the Peter Bent Brigham hospitals owe their existence to the generosity of citizens of Boston, and are examples of a type of American hospital which we defined at the commencement of this article.

"Boston contains another hospital of a distinct type, founded in 1864. It is called the Boston City Hospital, and is financed and managed by trustees who, in compliance with the ordinances, report fully each year to the Mayor of the City of Boston, who is the channel of communication between themselves and the City Council, from which the hospital receives substantial aid every year. The City Hospital has attained, under able superintendence, a high state of efficiency, and is one which British visitors should not fail to inspect and study during a visit to the United States.

"Did space permit, we should like to describe several other important American hospitals, including some of the more recently built hospitals in various states, notably that of Cincinnati, Ohio, and many other types, including the City and County Hospital at St. Paul, Minn. (700 beds), which has the unique distinction of being a municipal institution with a department for paying patients, and the Lakeside Hospital, Cleveland, Ohio (275 beds), founded in 1866 and rebuilt in 1896-98, of which Dr. A. R. Warner is the able acting superintendent. This latter institution will well repay a visit. It contains several good features, and its superintendent is a keen administrator, knowledgeable and courteous.

"Most of the great cities have one or more well-administered hospitals, some of which in recent years have attained a position which makes them interesting to hospital workers. We unfortunately have only space to take a very few examples of the larger hospitals representing the three types of endowed, public-supported, and municipal institutions. These must suffice for our present purpose, which is to demonstrate how closely certain British and American types are identical in origin, and the financial foundations on which they rest. Administratively, the best British and American hospital has often many things in common, the great difference in administration being that in the United States every important hospital and many of the smaller ones—which latter are full of interest and often excellently managed—are placed under the control of a superintendent as the supreme head, the majority of whom are members of the medical profession. There are, too, a few laymen; and in hospitals with as many as 300 beds there are instances where the superintendent is a woman whose management frequently is highly efficient and well worthy of study. We look forward to a time, after the war, when intercommunication between English-speaking people all over the world will become so greatly facilitated, as to make it a common practice for leaders of thought, and the most competent and knowledgeable authorities in every department of professional, institutional, educational, and scientific life, to visit their brothers and sisters across the seas, to interchange views and experiences, and in this way to immeasurably hasten the full development, on the highest standard, of human progress amongst English-speaking people all the world over."

The University of Nebraska, at Omaha, has recently opened a new general hospital to be operated in connection with its school of medicine. The building, which is four stories high, contains 120 beds, divided into a number of ward units, with three isolation beds adjacent to each ward. White enameled metal furnishings throughout are a feature. One hundred and fifty thousand dollars were expended on construction and equipment.

THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to their Medical, Surgical, and Nursing Services

Vol. IX *December, 1917* No. 6

THE PRIVATE WARD OF THE MASSACHUSETTS GENERAL HOSPITAL

A New Departure for This Hospital—No Provision Hitherto Made for Private Patients—Special Features of Equipment and Arrangement

By JOSEPH B. HOWLAND, M. D., Acting Resident Physician of the Massachusetts General Hospital, Boston

THE opening of the Private Ward of the Massachusetts General Hospital marks an important step in the history of the hospital.

During the past one hundred years since it has received the sick, the well-to-do, who have so generously aided this oldest of Massachusetts hospitals, have been excluded from its benefits, no matter how much they needed hospital care. No provision had been made for the reception of private patients, and members of the visiting staff were not permitted to receive a fee or gift from a patient.

The new building is, properly speaking, a private hospital rather than a ward, having a separate entrance from the rest of the hospital, its own kitchen, dining room, apothecary shop, store, x-ray plant, and operating rooms.

New private ward of the Massachusetts General Hospital.

The building is of eight stories, the exterior of limestone and red water-struck brick, laid in Flemish bond, with dark headers. It is L-shaped, with the longer wing extending north and south, thus exposing all the patients' rooms to the east and west. The short leg of the L contains the service rooms. The interior construction is of terra cotta and steel frame. The floors are of concrete, covered with brown or green American battleship linoleum. The bath rooms and service rooms have terrazzo floors, and all corridors and rooms have a 4-inch terrazzo base set at an angle of 45 degrees, which serves the double purpose of making the cleaning easier and keeping the furniture from injuring the walls. There are two elevators, one at the southern end for

patients' use and large enough to take a bed, and another in the service wing for general use. The ward accommodates 102 patients, the rooms being nearly all provided with connecting doors to permit assigning small or large suites. Interchangeable guards may be placed in all bedroom windows. Covered balconies, to which beds may be rolled, are located at the south end of each floor. On three floors in the service wing provision is made to care temporarily for a patient who might disturb others in the main wing.

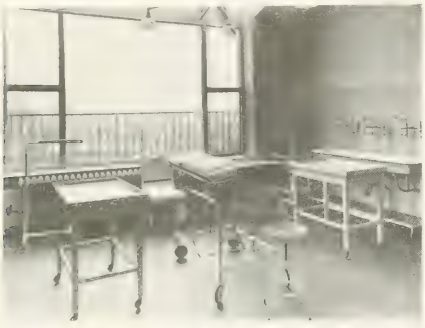


Fig. 2. One of four operating rooms.

Fig. 5. Sun parlor on the eighth floor.

Fig. 3. Library, located opposite the entrance.

BASEMENT

An ambulance entrance for kitchen, etc. The apothecary shop, locker rooms for special nurses and men and women help, the store rooms, the kitchen, and the nurses' and help's dining rooms are in the basement. The kitchen has the usual equipment, except that all jacket kettles, sinks, and vegetable steamer-tables are on pedestals with sanitary bases in place of the usual legs so hard to clean around. The kitchen floor is of black slate and the walls of glazed brick.

FIRST FLOOR

The main entrance of the building is located in the center, with a library opposite the entrance.

Fig. 4. Typical [illegible]

Fig. 6. Part of kitchen, showing sanitary base to all fixtures and ventilating hoods built into ceiling.

is provided near the elevator. The morgue is also located at this end of the building and connects with a room equipped for performing autopsies. Two Audffren refrigerating machines provide for ice-making and for the necessary refrigerators

One-half of this floor is given up to the necessary offices, reception rooms, and x-ray rooms. The other wing provides six bedrooms for patients. A covered corridor connects this floor with the main hospital, and furnishes a convenient ar-

rangement of intercommunication. An electrical recorder located in the main office registers the patients' signals and the time of nurses' response, showing the intervening time that has elapsed. as outlets for electric fans and lamps, and telephone wiring. Bedrooms having no fireplaces are connected by ducts to the roofs and ventilated by suction fans at the outlets. There is a sitting

Fig. 7. Nurses' dining room.

Fig. 9. Patient's bedroom.

Fig. 8. Patient's bedroom, showing indirect lighting, bedside light, signal system, and bed on wheels.

Fig. 10. Part of roof, showing covered portion in center.

TYPICAL FLOOR

The second to seventh floors are practically alike, each having fifteen bedrooms, some with bath rooms, others with toilet rooms, as may be seen by reference to accompanying floor plans. Each patient's room is connected by a Holtzer-Cabot Signal system with nurses' sitting room, head nurses' station, diet kitchen, and service room. There is an electrocardiograph connection in each room, as well

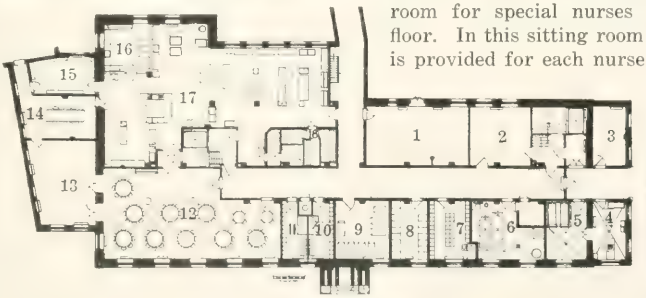


Fig. 11. Plan of Basement.

1. Receiving room.
2. Apothecary.
3. Stores.
4. Autopsy room.
5. Morgue.
6. Refrigerating plant.
7. Nurses' locker room.
8. Trunk storage.
9. Food truck room.
10. Women's locker room.
11. Men's locker room.
12, 13. Nurses' dining rooms.
14. Kitchen help's dining room.
15. Pantry.
16. Pastry kitchen.
17. Kitchen.

room for special nurses on each typical floor. In this sitting room a locked drawer is provided for each nurse.

In the service wing opposite the elevator there is a good-sized diet kitchen equipped with a china closet, tray rack, gas toaster, gas stove, steam-table, dish sterilizer, soapstone sink, and a ventilated, steam-heated closet for drying towels. The service rooms are equipped with ventilated specimen closet, soapstone sink, utensil and bedpan sterilizers, bedpan rack and hopper, as well as

utensil stand and laundry bag holders. Ample space is allowed for the storage of stretchers and wheel chairs in this wing. A large refrigerator especially constructed for holding flowers is provided, together with a sink for arranging and watering them. On the second and seventh floors are well-equipped laboratories for clinical work.

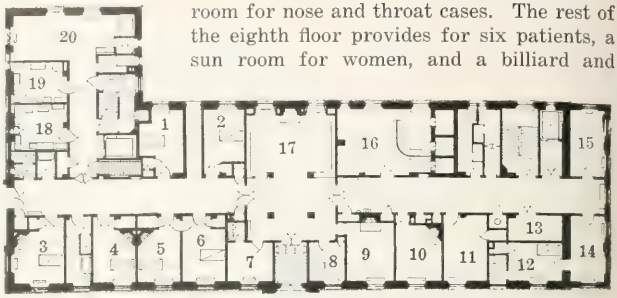


Fig. 12. Plan of first floor.

1 to 6. Patients' rooms.
7. Physicians' room.
8. Telephone room.
9, 10. Reception room.
11. Superintendent's office.
12 to 14. X-ray rooms.
15. Administrator's office.
16. Business office.
17. Library.
18. Diet kitchen.
19. Utility room.
20. Wheel chair space.

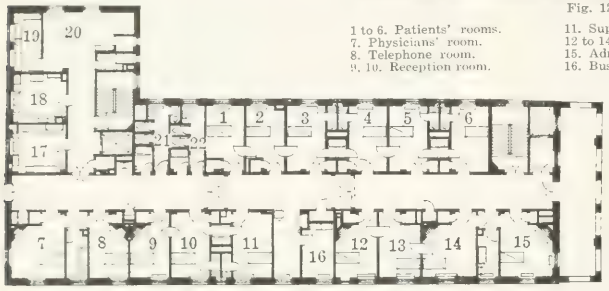


Fig. 13. Plan of second floor.

1 to 15. Patients' bedrooms.
16. Nurses' sitting room.
17. Diet kitchen.
18. Utility room.
19. Clinical laboratory.
20. Wheel chair space.
21, 22. Patients' toilet rooms.

EIGHTH FLOOR

At the north end, shut off from the rest of the floor, are three operating rooms, a surgical pathological laboratory, the supply room, sterilizing room, surgeon's locker and wash room, nurses' wash room, two anesthetizing rooms, and a special operating room for nose and throat cases. The rest of the eighth floor provides for six patients, a sun room for women, and a billiard and smoking room for men. A large plaster room equipped for orthopedic work is also located on this floor.

ROOF

Both elevators run to the roof. It is tile-covered, surrounded by a low parapet surmounted with a high railing. There are toilet rooms for men and women, and a covered area to protect beds in case of need.

The architects were Coolidge & Shattuck, Boston.

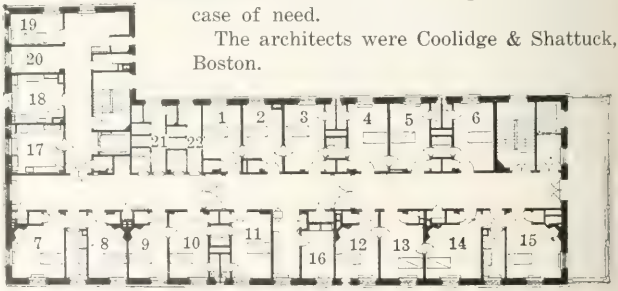
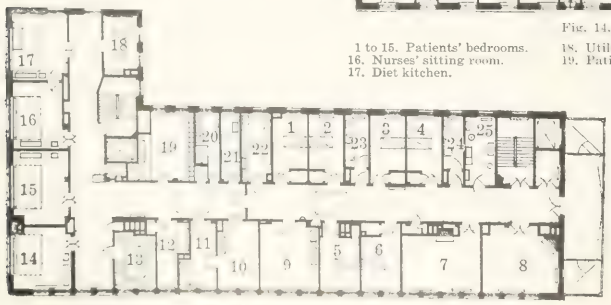


Fig. 14. Plan of third floor.

1 to 15. Patients' bedrooms.
16. Nurses' sitting room.
17. Diet kitchen.
18. Utility room.
19. Patients' bedroom.
20. Wheel chair space.
21, 22. Patients' toilet rooms.



Plan of eighth floor.

1 to 6. Patients' bedrooms.
7. Billiard room.
8. Sun parlor.
9. Plaster room.
10. Throat operating room.
11, 12. Anesthetizing rooms.
13. Sterilizing room.
18. Supply room.
19. Surgeons' locker and
21. Instrument washing room.
22. Diet kitchen.
23, 24. Patients' toilet rooms.
25. Utility room.

The question, what we want our public health nurse taught, is not easily answered. We want the finished product to possess so many of the attributes of perfection that, if we are to deal with ordinary human nature, compromise will have to be accepted. All are familiar with the descriptions of the necessary virtues required by those anxious to find the right woman for some form of social work, and many can sympathize with the weary head worker of a Children's Aid Society, who replied to such a request, "Madam, if I could find the woman you describe I should marry her, not pass her on to you."—Mary S. Gardner, "Public Health Nursing."

STANDARDS OF ALMSHOUSE ADMINISTRATION*

Necessities May Be Demanded, Comforts Asked for, Reasonable Pleasures Hoped for—Difficulty of Attaining Uniform Standards—Principles of Legislation—Necessity of Individual Investigation and Work

By FRANCIS BARDWELL, Inspector of Almshouses, State Board of Charity, Boston

THOSE of us whose business it is to deal with the affairs and management of institutions usually approach the subject through the main hallways; I feel that we would get further and see clearer if we came into the institution at the inmates' entrance and saw things from their point of observation.

We will say, then, that you and I, for reasons various, which may or may not be beyond our control, have come to that epoch in our lives when we are obliged to ask for assistance from public sources. Perhaps we have always been of those who have fought poverty and lived among those as poor or poorer than ourselves, wherein we are fortunate, or we may have been of those whose younger days knew prosperity and only through loss of our natural supporters and unfortunate circumstances have come to the point when existence can only continue by the aid of public relief. Whatever the cause of our dependence, the main point stands: we must be cared for at public expense, and by those in authority it is deemed best that we should be admitted to the almshouse.

When I have made application and been accepted I have a right to expect certain things pertinent to my comfort, welfare, and care. What they are I shall state and shall suggest how the almshouse administration may provide them.

1. I have a right to demand the common necessities; shelter, personal cleanliness, food, clothing, and medical attendance.

2. I have a right to ask for the following comforts: kindly attendance, quiet and decent quarters, reasonable freedom from objectionable fellow inmates, the opportunity of receiving visits from friends.

3. I hope to receive: some form of recreation, the pleasure of attendance at religious services at least monthly, employment suited to my age and physical condition, the right to protest, without detriment to myself, against any hardship I may feel that I am forced to bear.

I realize the first day of my sojourn in the almshouse that I am in a changed environment, and I hope I am reasonable enough to realize that the home exists, not for myself alone, but for all of us who accept the aid of the authorities.

*Read at the forty-fourth annual National Conference of Charities and Correction, Pittsburgh, June 6-13, 1917.

I. THE THINGS WHICH SHOULD BE DEMANDED

First, then, I demand as my right—shelter. This means the almshouse building. If my community is prosperous, I shall enjoy comforts and luxuries I have seldom had. If the community is poor, even then I shall probably be housed as comfortably as I have hitherto been accustomed to be.

So much has been said and written on various types of almshouses that I do not feel called upon to discuss at any length almshouse plans or construction. Briefly, we need a building, properly heated, allowing for separation of sexes; ample fire protection and fire escapes; well-equipped kitchen and laundry; well-arranged sleeping quarters; intelligently planned sanitary conveniences; an assembly room, or dining room large enough to use for an assembly room; rest rooms for the women and smoking rooms for the men; adequate hospital accommodations; provisions for the superintendent; and, above all, proper, comfortable quarters for the employees. I emphasize the latter because its lack is the cause of inefficient and constantly changing help, a serious detriment to proper almshouse administration.

The smaller the house, the more chance that it is really a home, and the larger, the surer it is to be just an institution.

One adamant rule, large or small—the house must be clean—eternally, chemically, if necessary, but absolutely clean. It must be properly heated, and by that I mean we must not lose sight of the fact that people 72 years old consider a temperature of 72 degrees chilly.

It should be, in larger institutions, provided with real ventilation and a constant change of air, and reasonably free from drafts.

Beds should be standard iron; mattresses comfortable; blankets and not comforts. Benches, except for able-bodied men, are not furniture; every old man and woman should be provided with a comfortable chair. "Trivial," you say, but you are not an inmate; I have to sit on that uncomfortable bench hours a day. And while we are on the little things that to the inmate are big things, let me urge that, in the women's dining room at least, small tables be provided.

As for personal cleanliness, there should be generous provision for lavatories, and individual

towels are requisite. Bathing should be systematic and intelligently supervised.

That inmates are properly clothed is only the beginning of the clothing proposition. I am absolutely against uniforms for almshouse inmates; I mean the type of clothing lacking individuality and branding the wearer as a public charge.

Provision must be made in every almshouse for proper storage facilities—for the care of winter clothing during the summer—for cleaning, mending, and, if the institution is of sufficient size, for making clothing.

It should be a hard-and-fast rule in every institution that no new article is issued until the remnants of the article to be replaced are produced and destroyed. This is one potent factor in controlling waste.

Inmates have a right to expect clothing suited to their condition, occupation, if any, age, and the climate. As, for example, properly fitted shoes are a right.

In regard to food, what shall the standard be? A sufficient amount of well-cooked, nutritious food, varied and suited to the condition of the consumers. Invalids and the sick should have the advantage of a dietary provided by the physician.

A large institution is forced to employ the services of one particular physician; however, I feel that this should not mean that certain cases should not be allowed to have visits, at the public expense, from their own practitioner. There is criticism, from time to time, of the city or county doctor, and especially if he is a part of a political structure or working on a small per capita charge.

As an almshouse inmate I am entitled to good medical attendance, and I look to the administration to furnish the same standard as they employ in their own families. If I am seriously ill, I should not be turned over to the care of other inmates, but I have a right to demand proper nursing.

Shelter, food, clothing, personal cleanliness, medical attendance—these things I demand.

II. THE THINGS WHICH MAY BE ASKED

I have a right to *ask* for kindly attendance. The selection of a superintendent and matron is no easy task for the poor directors. But the proper selection having been made, the problem of administration as far as the directors are concerned comes down to adequate supervision.

Whatever else a warden may possess in executive ability, he must be honest and kindly. We can get along without many other good qualities, but these two must be evident. It is well that he should be industrious, just, and economical. Even a moderate drinker should not be considered for the position.

If a superintendent cannot be trusted with the purchasing end of the institution he should not be held responsible for an excessive per capita cost. He should do the buying and he should be held responsible. He should have the employing and discharging of his assistants and be responsible for them. In a word, he must be the responsible head of the institution, and, unless he is, the success of the institution is never assured.

The matron must be a woman who has lost her temper for all time, a good manager, and, in a word, a mother to the inmate family.

The administration must be conducted for the proper care of the inmates. The institution exists for its inmates—not for one type, one group, but as is best for all.

Proper care should never be subordinate to mere economy—that is, a parsimonious administration is seldom efficient, and the best possible care is in reality true economy.

We hear a good deal these days on the proper grouping of almshouse types. Shall it be according to age, according to physical or mental handicap, according to creeds, races—what?

When I am an almshouse inmate I want to be placed in a group with whom I can congenially mix. I protest, should I chance to be a cripple, at being lodged with cripples, fed with cripples, always associate with them. I want an optimistic outlook even in an almshouse. I want to be allowed to mingle with kindred spirits. Why change the social status of the world because I am within almshouse walls? The only successful grouping I have ever seen was along the above-described lines and in most cases was the result of natural selection on the part of the inmates themselves. I'm speaking from the inmates' standpoint.

Again, as to visits from friends: I expect to be able to receive my friends, if I have any left, when I am an inmate, at least once a fortnight. In most almshouses, why do they not come oftener? It is necessary in large institutions to have visiting hours, usually from two to four one afternoon a week. Did it ever occur to you that my friends are working hard from two to four every afternoon so that they may not be obliged to join me here permanently? Why not allow visiting from one to five every Sunday and every holiday? Because that time is not convenient to the superintendent and the assistants? Well—whose almshouse is it?

III. THE THINGS WHICH MAY BE HOPED FOR

I have said what I have a right to demand, also

what I have a right to ask for or expect; now comes what I hope to receive.

The legal responsibilities of the authorities are to provide proper care and alleviate distress. Beyond that all is moral obligation, based on the conscience of the community. More and more we emerge from fixed rules, and as certain types formerly inmates have been cared for in other institutions and the almshouse population is slowly becoming standardized in most states, methods are coming into vogue that twenty years back would have been impossible.

And so now the almshouse inmate expects more of the administration and in progressive communities usually gets it. There is always the brake on the car of progress, the chief obstacle is the citizen who denounces a heating plant as too luxurious; then he protests against bathrooms, nurses, electric lights; he has much to say against the introduction of elevators in the older high buildings. His stock phrase is, "It's too good for a poorhouse and those who go there." He has a reason, many times, for his stand, and that reason lies in the unbusinesslike method of admitting and in the lack of investigation and lack also of a systematic housecleaning. He sees only the one man or woman personally known to him, whose life has been a riotous failure, and whose mental or physical collapse has necessitated custodial care; or he is acquainted, as we all are, with the winter inmate, who has to be outfitted at public expense, fed, and nursed, only to resume his usual summer career of fleeing from work. My friend the obstructionist, however, becomes a valuable ally when some unfortunate old man or women in whom he is interested becomes an almshouse inmate; it is the same obstructionist who then demands things heretofore impossible, because they mean happiness for *his* particular friend.

I, as an inmate, want recreation, work, religious services, and the right to report abuses and not suffer for so reporting.

I think it should be the duty of the superintendent, with the strong backing of the directors, to enlist the cooperation of various church societies and fraternal orders so that entertainments can be provided for the almshouse people—talks, concerts, simple treats, and in some cases moving pictures. I believe that every almshouse should have its Christmas observance, a tree, little remembrances and gifts, and above all the Christmas spirit that to many poor old people banishes for a time the feeling of complete dependence. Men and women should be provided with games, papers, magazines, etc. I know one almshouse that provides a car ride and annual picnic; and another where one of the ladies of the community opens her home for a whole day and entertains the old ladies. Such events provide pleasant anticipation and hours of wonderful memories. Rather a good investment in almshouse administration, as is anything that brings about the spirit of contentment.

We have not advanced rapidly in the matter of providing variety of labor for almshouse inmates. There is a strong sentiment against the manufacture for sale of articles that would compete with legitimate trade—pauper competition. This, however, should not prevent light work, suited to their age and physical condition, being provided for the inmates. The work test is a good indicator of character, and it is but human in the average superintendent to stretch the rules to their utmost to favor the willing and cheerful worker.

For the women there is always the family mending, general cleaning, ironing, assistance in the kitchen, and in the hospital department of the larger institution. However, it is surprising to note how few women who become almshouse inmates are able to use the needle. In some instances we find a little money earned by knitting, quilt-making, rug-making, and the like.

It is the task of the intelligent superintendent to fit the inmate to the proper kind of labor, nor should he forget that the shoemaker of the world may by preference forsake his last and become a good farmhand.

Beyond community labor—that is, the tasks performed for the benefit of all in the institution, the field for men is limited. A few men bring their trades with them and prefer to continue them, but they are few; perhaps this is because a majority of the men inmates come from the ranks of unskilled labor. Some men pick up the knack of making things easily, and if any encouragement is offered an industry will be established. If this is the case, a definite policy should be established. Articles must be sold through the office and visitors not importuned to buy. The money may revert to the maker if he or she can be trusted with it; if not, it can go into a community fund to be used to purchase extras for the hospital ward, for the Christmas dinner, for new records for the phonograph, or what not. At present this work is universally considered recreation, there being no obligation on the inmates' part. And, as previously mentioned, it is doubtful if the public would approve of workhouse methods in the average almshouse.

It is always a hard task to convince the average citizen that every almshouse inmate should do something, be it ever so little, as his bit for the community welfare. There is no question of the benefit to all concerned of such a measure and

without question most superintendents will report that in almshouses where a system of labor is properly handled complaints are few. I am not to give the impression, however, that all work should be done by inmate labor; it has its limitations.

If I am an inmate of an almshouse housing over a hundred inmates, I feel that religious services should be held at least monthly, preferably weekly. If the management will not arrange for such services at the home, then, if I am able and can be trusted, I should be allowed to go to church. If I have friends or relatives who are able to do so and care to have me visit them for a week or more and I am able to go, I should be allowed to go, but I should not be allowed to go if it has a detrimental effect upon my conduct when I return.

I want the right to protest to the directors or higher authorities against the fact that I am made to bear hardship or conditions unnecessarily harsh, without suffering additional discomfort because of the complaint.

It is here that I feel it is the duty of the state to step in, no matter in what capacity the state board serves, whether it be to govern or to supervise. I believe all complaints should be investigated. I do know from experience that only a small proportion of the complaints are just and founded on fact, but I also know that the few honest complaints need speedy adjustment, and I feel that the administration should allow free complaint and avoid public scandal.

A heralded official inspection is useless as an investigation of actual conditions, and an inmate during such inspection has little or no chance to state his case to a visiting official. It is true we hear on all sides the depreciation of "pauper evidence." I have found that "pauper evidence" is apt to be as reliable as ordinary evidence, and if the cause be just, even if crudely revealed, still convincing. I most certainly detest investigations of the pyrotechnic variety, because they do more harm than good, frighten the inmates, hamper the superintendent, and end in the usual pail of whitewash, with the abuses still existing. Investigations carried on by volunteer committees, composed of individuals zealous in the desire to stamp out wrong, but ignorant of almshouse inmates or almshouse conditions, knowing little of standards, bring havoc to the administration and at times force open insubordination, a condition that may take years to stamp out and make it all the harder for both inmate and administration. It is wise, then, to leave investigations to the directors or the state.

I don't believe any institution can be rightly managed without suitable rules and regulations, properly enforced, but handled with some degree of elasticity. I believe that no man or woman inmate should be allowed to become a leader of discontent, and it is the wise superintendent who can see the small cloud on the horizon and prepare for the tornado. It is here the individuality of the official counts, and I have found that the superintendent who in the good American style "kids 'em along" usually averts disaster, rather than the one who by hasty drastic action forces trouble.

All administration should be based on dealings with reasonable inmates, and because many inmates are unreasonable, I have advocated elasticity in enforcing rules. I feel that too often we fail to appreciate fully an inmate's position because we refuse to get into his place and judge conditions from his position.

As long as the inmate population varies in type, as it does in the different states, it is difficult to set a definite standard; only when we all agree upon the types that should rightly form the almshouse family can any true standardization be defined. Nor can it be forgotten that the standard for the small almshouse is much different from that for the large institution, and it is doubtful if one standard can be laid down that will cover the two, except in the fundamentals.

The first problem would be standard types, then standard laws. Are we to continue the almshouse, or are we to establish in its place the infirmary? The drift is toward the latter. As far as I can see the almshouse types of today are (after putting onto the state or county the care of the criminal, the mental defectives, and the child) the sick, chronics, the aged, cases of mild mental defect, cripples and blind unable to earn a living, children awaiting placement, non-producers whose peculiarities prevent self-support, the winter intruder —and of these, eventually, the winter intruder is bound to go. Where most institutions care for one type, the almshouse cares for many, so are its problems multiplied.

There should be uniformity in laws, at least in as far as the following:

Criminals should not be committed to an almshouse.

All inmates should be required to perform labor as far as their ages and physical condition will allow.

Acute alcoholics should be forbidden the almshouse unless its equipment is such as to permit of their being isolated and receiving hospital care.

Children should not be taken for a period exceeding sixty days, and then should be kept separate from other inmates.

Married couples should be allowed the comfort of each other's society during the daytime at least.

If groups based on these types and administra-

tion carried out under the provisions of law as outlined above could be combined, standards could be devised.

From the inmate's standpoint he certainly has a just grievance if anyone and everyone who does not just fit in some other place is forced into the inmate family.

It is also true that little attempt is made to reinstate inmates in occupations when self-support can be acquired. Of course, the larger the institution the more easily an individual gets lost and the less is his chance of getting back into an independent position. But it is the large institution which needs proper investigating facilities to determine the feasibility and advisability of discharging. No institution is doing its part unless someone will undertake effort with the individual, and I believe such effort is a measure of economy. To be a success it takes work, and hard work, on the part of an investigator who is willing to forgive an endless number of times and to whom discouragement is an unknown word. Perhaps this is because, as compared with other kinds of dependents, we have considered the average almshouse cases as unpromising, if not hopeless. It is probable that among men admitted for the first time at least one quarter could be assisted to independence and future admission postponed. With women it is different; few women, unless rightly to be considered inmates, apply for admission, and usually their entrance is due to the fact that they have ceased to be earners. And in some cases it is difficult to retain women who, the authorities feel, should not be surrendered from the custodial care furnished in an institution.

The almshouse has suffered from the fact that little attempt has been made at house-cleaning. Had we been as zealous with its inmates as with the dependent families under our care we could, under usual standards, assume that we had done our full duty, but when a case is admitted to the almshouse the investigator who has followed it usually sighs and writes "Finis" on the record, and it is closed.

I have confined myself to the institution, and purposely, because the problem of the farm end belongs to the department of agriculture. I have made many mental notes, however, relative to the farm end of the institution, and I'm bound to say I find myself damning with faint praise the mixing of agriculture and the care of the indoor poor. The decadence of the farm dates back in Massachusetts to the time the insane were turned over to the care of the state; this caused a lack of labor and consequently an increased cost in farm expenses. However, it must be added, in justice to the threefold county institution—that is, the organization handling the poor, the insane, and petty criminals—that a farm is a necessity and a big factor in practical employment and economical management. But I am swinging to the idea that the present conditions are such that the infirmary is gradually taking the place of the almshouse. This is but natural; the poorfarm succeeded the workhouse, the almshouse or home for the aged succeeded the poorfarm, and now the hospital or infirmary is bound to succeed the almshouse.

ECONOMY IN BRITISH WAR HOSPITALS

Immense Savings in Food, Drugs, Dressings, Laundry, Heat, Lighting, Etc., by System and Care

We are told, on the authority of a special correspondent of the *Daily Chronicle*, that a saving of 2,500,000 pounds ($12,500,000) has been effected in the military hospitals by Dr. Napier Burnett and a staff of one statistician and one typist, working under Sir Alfred Keogh at Adastral House. This has been accomplished without hampering the medical work or in any way stinting the patients. Dr. Burnett found that no hospital knew its cost in food. Physicians order chicken because of a "bedside tradition," with no notion whatever of the caloric value of chicken. Dr. Burnett therefore began with the kitchen.

"He asked hospitals to inform him (1) what check existed on the stores coming into their cupboards; (2) how these stores were used; (3) what use was made of their waste products—dripping, bones, bread, etc. He then made a table of each hospital of (1) the daily cost of its food; (2) its daily consumption; and (3) its daily caloric value. These inquiries resulted in the most striking discoveries. Some hospitals—notably the Third London General, at Wandsworth—were found to be admirably managed; in others the cost was a prodigious as the waste. In certain hospitals officers were given three times as much meat as the men, although in France the rations are the same. In some hospitals the caloric value of the food was enough to blow the patients to smithereens; in others it was dangerously low. Little or no use was male of cheese. Oatmeal and rice, where used, were in many cases so badly cooked as to be wasted. The care of food was not properly considered. Covers for milk, the use of cold storage, the ventilation of the larder—these things were ignored by the busy doctors absorbed in their healing. Dr. Burnett made his appeal to matrons and nurses. He introduced a system of rivalry—command v. command, hospital v. hospital, ward v. ward. Every month every hospital now knows the quantity of food it consumes and its cost.

"The same careful attention was paid to drugs and dressings, to the laundry, and to heat and lighting. As regards the last item, Dr. Burnett appealed to the nurses for economy on the ground that waste of fuel meant bringing back a thousand miners from the front to hew coal for them. As regards the laundry, his appeal reduced an average number of pieces from 15 per man per week to 10 and 12; in some hospitals as many as 30 pieces per man per week had gone to the wash. There was a saving in drugs and dressings directly nurses understood the need for economy.

"The result of these inquiries has saved the country more than two and a half millions in a single year, and the efficiency of the hospitals has been increased. The soldier's food is better cared for, better cooked, and has a better caloric value."

LAXATIVE FOOD PREPARATIONS AND THEIR COMPOSITION

Wheat Brans, Bran Biscuits, Agar-Agar, and Other Laxative Preparations—Analyses of Composition—Enthusiastic Claims of Manufacturers—Often Excessive—Wide Range of Cost of These Preparations

By JOHN PHILLIPS STREET, Chemist, Connecticut Agricultural Experiment Station, New Haven, Conn.

THE advertising columns of our newspapers, our magazines, and even our medical journals would lead the casual reader to the conclusion that to a very large proportion of the American people constipation was a constant menace and annoyance. Perhaps such a conclusion would not be far from correct. The purveyor of medicines, whether he be a plain, ordinary, everyday nostrum faker, or whether he be the more respectable manufacturer of a so-called "ethical" proprietary, has recognized the prevalence of this evil, and the market is flooded with preparations claimed to be effective for its relief. Aside from the mineral oil (liquid paraffin) and phenolphthalein preparations, which most competent authorities class as not only effective, but generally innocuous, hundreds of preparations depending on the action of more or less drastic cathartic or purgative drugs are offered daily to the public. That the habitual use of these cathartics is likely to injure the user is scarcely open to argument.

Many of our food manufacturers have also recognized the American tendency toward constipation, and we find numerous brands offered today to correct it. I have no quarrel with the manufacturers of such preparations, and clearly recognize their possible usefulness. While fresh air, exercise, and less eating to excess would doubtless be the more natural means of combating any but the most stubborn cases of constipation, it is doubtless true that in numerous instances the use of such foods would be followed by benefit, and only in those cases in which digestion was greatly impaired would there be any serious danger from their consumption.

It is obvious to any student of nutrition that the average American dietary contains too great a proportion of concentrated foods. In our choice of foods and in our methods of cooking them we have bent all our energies toward securing the food in as digestible a form as possible. Many of us have actually fallen so low as to depend on the so-called "predigested" foods, asking the manufacturer or chemist to do to their foods what the Almighty intended should be done by our own digestive systems. At any rate, whatever the cause, the diet of most of us contains too much food that is completely digestible and is deficient in the bulk or roughage which every successful cattle-feeder recognizes is essential to the health and well-being of his farm animals.

At the present time the most popular method of repairing this dietary deficiency is the use of some relatively indigestible substance, such as wheat bran, either alone or in combination with other materials, or a completely indigestible substance, such as agar-agar (Ceylon moss), likewise used either alone or combined with some cereal food. In a few instances fruits, nuts, olive oil, or flaxseed meal are components of these special laxative foods.

It is not my purpose to discuss the merits of any of these groups. That their use in many instances is followed with great success it would be foolish to deny. The purpose of this paper is simply to present the results of my analysis of a number of these preparations, so that the physician, the dietitian, and the consumer may know the composition of the foods he is prescribing or using, and that he may not be misled by specious claims of the manufacturer.

The table contains the analyses of thirty-one of these preparations examined in my laboratory, chiefly within the last three years.

Before discussing their composition, let us examine some specific claims made for certain of these foods.

Bran Biskue.—"Our branniest wafer and has proved to be the delight of bran eaters."

Bran-eata Biscuit.—"An appetizing cereal food . . . combined with sufficient bran to be effective, shaped into biscuit form and baked."

Bran Zos.—"In addition to the outside coat of wheat, rich in phosphates, . . . contains the gluten layer."

Brose.—"Contains 50 percent more bone and nerve-building salts and cellulose than any other food."

Cerag.—"Prepared principally from whole wheat, barley malt, and agar."

Cerena.—Claimed to contain wheat, olive oil, and cotton-seed meal.

Colax.—"Cellulose prepared from Ceylon moss."

Dieto Nut Cereal.—Claimed to be made from whole wheat flour rusks, pine nuts, and peanuts. "Slightly sweetened with Dieto Saxin" (saccharin).

F. B. A. Laxative Health Biscuit.—Claimed to contain flaxseed, bran, and agar-agar.

Fruit Nut Cereal.—"Contains figs, raisins, walnuts, wheat bran, malt, thoroughly dextrinized."

Good Health Biscuit.—"More blood- and bone-making elements than any other food."

Laxa.—"Sterilized wheat bran and Ceylon moss."

Sea Moss Farina.—"Genuine sea moss, toned down

WHEAT BRAN, BRAN BISCUITS, AND OTHER LAXATIVE FOODS

Date of analysis	Brand.	Water	Ash	Protein (N × 6.25)	Fiber	Nitrogen-free extract	Fat	Cellulose	Phytin phosphoric acid	Calories per 100 gms.
1914	Wheat Bran, Ballard's Obelisk	11.45	4.48	17.31	5.56	53.78	7.43	*	*	311
1917	Wheat Bran, Culp's Capitol	11.16	5.30	13.38	8.15	57.73	4.28	*	*	323
1914	Wheat Bran, Health Food Co.'s	11.57	5.68	14.25	8.19	56.28	4.13	*	*	319
1914	Wheat Bran, Jireh	11.08	4.30	16.81	6.33	56.68	4.80	*	*	337
1914	Wheat Bran, Johnson's Educator	11.64	6.09	15.38	7.81	54.43	4.65	*	*	321
1914	Wheat Bran, Johnson's Educator (Bran Meal)	11.78	2.88	12.25	3.84	66.49	2.76	0.54	1.15	340
1914	Wheat Bran, Kellogg's	9.63	6.03	16.25	8.31	54.31	5.24	*	*	329
1914	Bran Biskue	8.50	3.08	12.06	2.23	61.05	13.08	0.22	0.57	410
1917	Bran-eata Biscuit	9.88	4.35	9.13	3.56	72.21	0.92	*	*	334
1917	Bran Zos	11.85	2.96	13.19	3.81	65.71	2.45	*	*	338
1914	Brose	10.13	2.63	14.44	3.13	65.37	4.30	0.68	0.73	358
1917	Cerag	9.15	3.56	11.25	1.99	73.15	0.90	*	*	..
1910	Cerena	7.19	4.88	27.81	2.40	46.35	11.37	*	0.67[1]	399
1914	Christian's Laxative Bread	9.93	2.78	10.00	1.33	74.58	1.38	0.24	0.36	351
1909	Christian's Laxative Cereal Flakes	13.04	1.67	10.37	1.00	72.55	1.37	*	*	344
1914	Colax	13.08	2.08	1.14	0.13	82.80	0.78	13.18	*	..
1914	Dietetic Bran Biscuit	9.28	4.95	9.94	1.68	69.20	4.95	0.12	0.78[2]	361
1914	Dieto Nut Cereal	5.00	1.95	21.63	1.22	51.82	18.38	*	*	459
1914	Educator Bran Cookies	7.12	3.27	8.88	1.50	64.75	14.48	0.09	0.41	425
1915	F. B. A. Laxative Health Biscuit	11.13	3.13	6.13	0.68	77.20	1.73	*	*	349
1917	Fruit Nut Cereal	7.33	3.15	13.50	2.36	72.45	1.21	*	*	355
1914	Good Health Biscuit (Kellogg)	10.60	1.18	7.69	1.48	74.57	1.18	0.18	0.00[3]	340
1914	Health Food Wafers	9.70	5.28	10.00	1.40	65.77	7.85	0.24	0.65[4]	374
1917	Indian Digestive Biscuit	8.67	5.02	12.81	5.23	66.03	2.24	*	*	336
1914	Kellogg's Laxative Biscuit	9.45	2.95	16.69	2.43	57.78	10.80	0.34	0.33	395
1915	Laxa	6.60	5.03	12.38	6.58	66.63	2.78	*	*	..
1914	Mansfield's Agar-Agar Wafers	7.93	2.33	7.13	0.75	69.86	12.00	0.13	*	..
1914	Oval Digestive Biscuit "H & P"	8.80	2.07	7.75	0.45	64.61	16.32	0.09	0.31	437
1917	Sea Moss Farina	15.61	13.56	9.13	1.50	59.93	0.27	*	*	..
1915	Uncle Sam Health Food	6.25	3.10	21.25	3.98	40.99	24.43	*	*	469
1917	Zim	13.16	1.96	7.44	1.51	74.23	1.70	*	*	342

*Not determined.
[1]Total phosphoric acid, 2.32 percent.
[2]Total phosphoric acid, 1.21 percent.
[3]Total phosphoric acid, 0.52 percent.
[4]Total phosphoric acid, 0.96 percent.
[5]Total phosphoric acid, 2.41 percent, with considerable lime and a trace of iron.

with a cereal blending. The fragrance of the sea breeze with its tonic properties."

Uncle Sam Health Food.—"Flaxseed and whole wheat, flavored with salt and celery."

Zim.—"Popcorn, flaked corn, bran, and hominy."

A reading of the foregoing claims shows considerable enthusiasm, often misplaced, on the part of the manufacturer. In some cases there is downright misrepresentation. We will not attempt to discuss these preparations individually. The table gives the customary data as to the composition of each, and in several instances galactan and phytin phosphoric acid are also reported. These two determinations need a word of explanation. Agar-agar, Ceylon moss, and similar substances contain the carbohydrate galactan. The absence of this ingredient in a mixture, therefore, will show that no agar-agar is present. Similarly it has been shown that a considerable part of the phosphoric acid of wheat bran exists in organic form as phytin. The amount of phytin phosphoric acid present, therefore, would measure in some degree the proportion of wheat bran present. Wheat bran itself contains about .40 percent of galactan as well, so that a figure much in excess of this would suggest the use of some other galactan-yielding material, such as agar-agar. It is to be regretted that these determinations were not made in all the samples, but for various reasons this was not done at the time they were examined.

The following brands listed certainly contain agar-agar or a similar substance: Cerag, Colax, F. B. A. Laxative Health Biscuit, Laxa, Mansfield's Agar-Agar Wafers, and Sea Moss Farina. The amount of agar-agar in these ranges from nearly 100 percent in Colax to less than 1 percent in Mansfield's Agar-Agar Wafers.

Aside from those brands whose names clearly indicate the presence of wheat bran, the following show bran to be a constituent: Brose, Cerena, Christian's Laxative Bread, Health Food Wafers, Kellogg's Laxative Biscuit, Laxa, and Oval Digestive Biscuit.

The claim for "bone-making" elements in any food generally rests on the amount of phosphoric acid present, and yet one of the brands particularly stressing this claim contained only .52 percent, less than any of the other brands tested.

The seven samples of wheat bran show a considerable range in composition. All were clean, however, and well suited for human food. The fiber and the organic phosphorus of the bran are the chief ingredients which give it its anti-constipating properties. In the samples analyzed the ash ranged from 2.88 to 6.09 percent and the fiber from 3.84 to 8.54 percent. Other things being equal, it would seem that the brands showing the highest percentages of these ingredients would be the most effective in preventing constipation.

The majority of these laxative preparations are relatively expensive. Owing to the present wide fluctuation in the prices of cereal products, no prices are given in the table, as the analyses extend over a period of eight years. It may be said,

however, that at the time of the analysis the cost of these preparations ranged from 8 cents to $2.76 per pound, and it is by no means certain that the higher-priced brands are any more effective than the cheaper ones. The wheat brans show a range in cost from 6.5 to 20.5 cents per pound, showing either the one to be an extremely reasonable purchase or the other a grossly extravagant one.

CINCINNATI'S SUCCESSFUL ANTITUBERCULOSIS CAMPAIGN

Team-Work the Essential Feature—Cooperation With the Municipal Tuberculosis Sanatorium and Support of Tuberculosis Dispensary and Summer Camp for Children—Valuable Activities

By COURTENAY DINWIDDIE, Cincinnati, Superintendent of the Cincinnati Anti-Tuberculosis League

THE city of Cincinnati, a little over two years ago, adopted a program of action for reducing tuberculosis which has been characterized by Mr. Philip P. Jacobs, assistant secretary of the National Association for the Study and Prevention of Tuberculosis, as "unique in its breadth of vision and its definiteness of purpose." I do not believe that any other city can show such a splendid record of team-work as Cincinnati in carrying out this program.

Each society for the prevention of tuberculosis, while following certain broad lines of attack upon the problem, has developed more or less unique features, adapted to peculiar needs of the community which it serves, or expressive of the special talents of those in charge of the local work. The work of the Cincinnati Anti-Tuberculosis League is inspired and controlled by the firm belief that, if the tuberculosis campaign is to have the fullest measure of success, not only every health and social service agency, but also every citizen, must be definitely enlisted in the fight.

MUNICIPAL TUBERCULOSIS COMMITTEE

The "Cincinnati Plan" for tuberculosis work is typified in the organization and work of an advisory committee for the Anti-Tuberculosis League, known as the Municipal Tuberculosis Committee. It has been asked whether that committee does not duplicate the work of the league. It does not. The Municipal Tuberculosis Committee represents all of the public departments and private agencies directly interested in health and social service work. Its services are advisory and cooperative in nature. It meets from time to time for the purpose of receiving suggestions from the Anti-Tuberculosis League and other agencies and of formulating plans for more thorough control and prevention of tuberculosis, conceived along broad lines. In this way practically all organized civic agencies of the city are in complete harmony as to what are the next steps to be taken in the antituberculosis fight, the relative importance of each, and which are the proper agencies for carrying them out. The value of this complete agreement and of the team-work secured through it is inestimable.

An ambitious program was adopted by the Municipal Tuberculosis Committee in 1915. Most of the items in this program have been carried into effect or are under way at the present time. Some of those which are more important might be briefly mentioned.

SOME RESULTS OF TEAM-WORK

The bringing of the national social unit plan to Cincinnati is regarded by members of the Municipal Tuberculosis Committee as the most important achievement resulting from the 1915 program.

This plan was secured for Cincinnati in spite of the competition of fifteen other cities and the virtual decision of the officials of the national social unit organization to conduct the experiment in Washington. The cooperation of all agencies through the Municipal Tuberculosis Committee, and the effective preliminary work already done for the Cincinnati health center plan, were among the principal determining factors in the selection of Cincinnati. The distinctive features of the social unit plan, which differentiate it from health center plans, may be summed up as follows:

1. It provides the most definite, practical working program which, so far as I know, has yet been proposed for securing not just the cooperation of the people to be benefited by intensive health work, but their actual participation, in a democratic way, through block and neighborhood organization, in the study and solution of their own needs.

2. It provides the most definite working program, which, so far as I know, has yet been proposed for group organization, by which the services of skilled groups, such as doctors, nurses, statisticians, social workers, etc., will be readily available for greater efficiency in health work, without imposing the opinions of one group arbitrarily upon an affiliated group, whether in the same field or another field of work. This group

organization will be on a national, city, and district basis.

3. It squarely faces the problem of the socialization of medicine, and, instead of developing a system whereby the physicians of the social unit will be deprived of their practice without consultation, definitely takes them into the plan on a thoroughly democratic basis.

4. As a concrete means of securing the participation of residents of a district in the social work, and at the same time of retaining the value of the services of trained specialists, it provides for a system of what might be termed general practitioners and specialists in social work. In other words, residents of the neighborhood, democratically selected as local friendly visitors, are the general practitioners who will be given courses of instruction in community service, and the physicians, nurses, and social workers are the specialists who will be called in whenever needed.

Another achievement of which the antituberculosis workers of Cincinnati are proud is the passage by the 1917 Ohio Legislature of a bill creating a health insurance commission, with an appropriation of $25,000, to study the subject for two years and report at the next session of the legislature. The plan for this commission was fathered by the Municipal Tuberculosis Committee in its 1915 program, and the Anti-Tuberculosis League conducted a state-wide campaign of information on the subject.

Still another definite goal set for itself by the committee was the securing of a substantial increase in the appropriation for the municipal tuberculosis sanatorium. In view of Cincinnati's being hampered financially, together with all other Ohio cities, by too restrictive legislation, this seemed a hopeless task. It was accomplished, however, after a city-wide campaign of information, by the generous action of the Hamilton County Commissioners, in appropriating $25,000 to be added to the city's budget for the maintenance of the patients at the sanatorium.

Another vision which the committee had was an increase in the capacity of the league's summer camp for children at Kroger Hills. Mr. B. H. Kroger, who donated the camp site and the original building, noted the benefits to the children with keen interest, and generously gave an additional building, increasing the capacity of the camp to 135.

In the belief that bad housing conditions are a vital factor in the spread of tuberculosis, whatever science may determine as to whether they are a direct or contributing cause, the improvement of such conditions was one of the aims of the program. A special study of housing conditions was made in connection with the survey of tuberculosis by the United States Public Health Service, at the request of the league and the health department. The formation of the Cincinnati Better Housing League, which has been actively at work for nearly a year, was greatly aided by the presentation of the results of this study.

It may be seen from the foregoing that those working for the reduction of tuberculosis in Cincinnati are very decidedly of the opinion that, to be effective, such a campaign must aim at prevention as well as cure.

RELATION OF THE LEAGUE TO THE MUNICIPAL TUBERCULOSIS SANATORIUM

I doubt whether any city can show closer cooperation between a private antituberculosis society and a city sanatorium. The Anti-Tuberculosis League, to its regret, still conducts the city's only tuberculosis dispensary, because the city is as yet unable, financially, to take this over. This dispensary is the clearing house for all admissions to the sanatorium. A report on home conditions accompanies the patient, and the league's field nurses keep in touch with home conditions during the patient's stay at the sanatorium, and, being notified promptly of his discharge or prospective discharge, at once follow him up to see that the benefit of the sanatorium care is not lost.

Five years ago the league employed a social service nurse to be a neighbor and friend to all of the patients at the sanatorium, and to connect its work directly with that of the league. As an aid to her in providing entertainments, various comforts, and attractions for the patients, a hospital social service committee was formed three years ago, and has done much to make the patients' stay at the sanatorium more pleasant. Two of its most recent deeds have been the purchase of a moving picture machine, through the generosity of one of its members representing the Cincinnati agents of the Metropolitan Life Insurance Company, and the construction of a wading pool for the children.

The work of the social service nurse has now been taken over by the city, and the league for the past eighteen months has employed a handicraft teacher to teach the patients various forms of light employment, such as basket-weaving, the making of useful brass ornaments, such as paper knives, trays, etc., embroidery for the women, etc. During 1916 there were 118 patients at work, an average of seventeen working each day, and over $500 worth of articles made by them were sold, the proceeds being returned to them.

The ever-present problem of finding suitable employment for convalescent and arrested cases of tuberculosis was one of the perplexing ques-

tions for which the Municipal Tuberculosis Committee attempted to find a solution. One of the measures advocated was the employment by the State-City Labor Exchange of a special agent for finding positions for such patients. Through the valuable cooperation of the Associated Charities, a special study of this subject was made and a worker assigned to the task of finding positions for handicaps during the experimental period. This work is now being carried on by the State-City Labor Exchange. The results have been encouraging, but it is too early to give a definite opinion as to its ultimate success. Another thing which was considered necessary in this program of employment was the organization of some special form or forms of industry, which should supply temporary employment to tuberculous patients while suitable and more permanent positions are being found for them. This is one of the plans to be taken up next.

SUMMER CAMPS FOR CHILDREN

The work of the league in its preventorium or summer camp for children has been somewhat unique in several ways. It is an attempt to make, with the complete cooperation of the open-air schools of the city, a definite all-the-year-around program of outdoors and fresh air for children between the ages of 5 and 15 who are predisposed to tuberculosis. It has little or no relation to the plan of fresh-air outings for one or two weeks, which is in effect in some cities. It is an outdoor camp with as little institutional ceremony and routine as possible; vegetables from its own garden and plenty of good food as a complement to the fresh air and sunshine. On the other hand, it is in charge of a trained nurse, the children are visited frequently by a physician, a rest period is enforced, and everything possible is done to secure the best results. The 184 children made an average gain of 3¾ pounds during their stay at the camp last summer, which averaged 49 days. The advantages of prolonged stay at the camp are easily seen in the following percentages of gain: for 98 children staying from 6 to 10 weeks, 8.02%; 36 children staying from 4 to 6 weeks, 4.96%; 25 children staying 2 to 4 weeks, 4.37%; 10 children staying 1 to 2 weeks, 1.22%.

EDUCATIONAL WORK

Mr. Philip P. Jacobs of the National Association for the Study and Prevention of Tuberculosis has called the educational work of the league "carefully planned and admirably executed" and "well worthy of imitation by many other cities." It has followed three general principles: (1) to suit the method of approach and personality of a lecturer to those who are to be reached; (2) to use varied forms of educational devices, especially those which prove to be most popular; and (3) to follow up educational work done so that its effect is not lost. In charge of its lectures, exhibits, etc., for working men and women, it has placed a man of twenty years' experience in factory work, who has the sympathy and the cooperation of all with whom he deals. In charge of its work of lecturing to school children, mothers' clubs, etc., is a trained nurse of long experience with children, and it has a lecture staff of thirty volunteers, upon whom it may call for special lectures on special subjects.

The educational campaign includes novel features each year. In 1916 a corps of 700 workers, of whom 400 were boy scouts, under the supervision of the league, painted on the leading street corners and at frequent intervals on many of the sidewalks, the sign, "Don't Spit on Sidewalks." This was done one night without preliminary announcement, and was followed up the next day by wide publicity in the papers, the distribution of special literature on spitting throughout all the schools, and an active campaign by the health department for the arrest of persons found spitting on sidewalks. Moving pictures and other special methods of reaching the public are freely used. A total of 112,455 persons were thus reached by various methods last year.

One branch of its work in which the league has had unusual success has been that of suppressing tuberculosis frauds. In 1915, in particular, there was a large crop of these organized efforts to bleed sufferers of tuberculosis. Following are the types of such frauds which were suppressed that year: (1) a physician claiming to have a "cure," the revocation of whose license was secured; (2) a resident of Cincinnati, who was a firm and mistaken believer in the value of a certain remedy which he had prepared, whom it was finally necessary to prosecute in court; he was fined and agreed to discontinue his practice; (3) a young man living in Columbus, Ohio, who advertised in the Cincinnati papers a "cure" which he called "Tubertabs"; he was made to realize the error of his practices and to discontinue them; (4) a Chicago physician, who advertised in Cincinnati papers, and who discontinued such advertisements after presentation of evidence concerning him to the United States postal authorities; (5) a so-called "chemical company" of Cincinnati, which, through the cooperation of the Attorney-General of Ohio, was made to give a written pledge to discontinue its practices; (6) agents for the Children's National Society, who withdrew from this city after information concerning it was sub-

mitted to the city safety director, who issued a warning to these agents; (7) a nationally organized concern, which conducts a wide advertising campaign, the sale of whose remedy was largely reduced in this city through the cooperation of fourteen of the city's leading drug stores in refusing to handle it.

A NEW PROGRAM

Believing that an organization which is worthy to live should be blazing new trails, the Municipal Tuberculosis Committee, on April 18, 1917, considered a list of recommendations of the Anti-Tuberculosis League, and adopted a new and far-reaching program for the relief and control of tuberculosis. This program also is based upon the conviction that the time has come for the adoption of real measures of control, and that the appalling increase in France of tuberculosis resulting from the war makes it imperative that proper steps should be taken at once to prevent similar conditions occurring in this country, and provides an unanswerable argument for measures that shall be really effective.

CAFETERIA SERVICE FOR TUBERCULOSIS PATIENTS

Better Service to Ambulatory Patients by Cafeteria System—Saving in Cost Through Elimination of Waste—Change Popular With Patients

By HENRY D. CHADWICK, M. D., Superintendent Westfield State Sanatorium, Westfield, Mass., With the Collaboration of HERBERT W. SMITH, Steward of the Sanatorium

IN December, 1913, Dr. Walter Bailey, chairman of the Massachusetts Board of Trustees for Hospitals for Consumptives, suggested to the superintendents of the four sanatoriums that they consider the proposition of cafeteria service for the patients in their institutions. Each of the superintendents at that time, of whom I was one, believed that the apparent disadvantages of the plan were so many, and especially that so much confusion and delay would result from individual self-service that it was not practicable for tuberculosis patients. We so reported to the trustees and the matter was dropped.

About a year later, in the December, 1914, issue of The Modern Hospital, I chanced to read the article by Miss Mary L. Keith, superintendent of the Rochester General Hospital, describing a self-service plan in successful operation for the employees of that institution. I was much impressed with its advantages as stated by her, and felt that it would be a great improvement over our waiter service in the help's dining room.

We had but one waiter for about forty employees, which was not sufficient for quiet and orderly service, but as the employees came to meals at slightly different intervals the work could be done by one person. There was more or less complaint of the food and delay in service. These were justified often, because the food when it reached the individuals was often cold and unappetizing. Frequently it was spoiled by delay in serving. This could not be remedied, because we could not afford to hire the number of waiters necessary for quick service.

The board of trustees approved of a trial of the plan, and in April, 1915, the necessary equipment was installed to care for the employees on the self-service basis. There was very little opposition to the change, and the few persons who objected to going to the counter were soon won over by the obvious advantages that they were quick to perceive. The food was always hot, the service was rapid, and the opportunity for choice was greatly appreciated.

This plan worked so satisfactorily in that dining room that it was decided to extend its advantages to the adult ambulatory patients, of whom there were about one hundred and twenty-five. The partition separating the patients' dining room and the kitchen was cut through to provide a place for a counter, back of which the cafeteria equipment was installed. The carpenter work and necessary equipment cost approximately two thousand dollars. The oak dining tables were cut down in size and Carrara glass cemented to the old wood tops. Discontinuing the table cloths proved a sanitary as well as an economical measure.

This cafeteria was opened March 21, 1916. It met with favor from the first, and a short time after its installation the patients voluntarily signed a statement commending the new service and approving the change. During the sixteen months it has been in operation no complaint of the food has been made; on the contrary, the patients, realizing the prevailing high cost of supplies, have stated that they do not see how we can provide so good a bill of fare. At the present prices this costs us approximately 34 cents per consumer.

The following is a copy of the week's menu served July 24 to July 30, 1917, inclusive:

WESTFIELD STATE SANATORIUM, JULY 28 TO JULY 30, 1917

SATURDAY

Breakfast

Farinose.
Samp.
Hamburg steak (plain).
Hamburg steak (onions).
Fried ham.
Boiled rice.
Corn bread.
Coffee, milk.

Dinner

Veal pie (family style).
Braised beef.
Boiled potatoes.
Mashed potatoes.
Wax beans.
Swiss chard.
Bread and butter pudding.
Old-fashioned rice pudding.
Milk.

Supper

Krumbles.
Corn flakes.
Baked beans.
Brown bread.
Escalloped tomatoes.
Frosted cup cakes.
Iced tea.
Milk.

SUNDAY

Breakfast

Fruit.
Mother's wheat hearts.
Bacon.
Dropped eggs on toast.
Fried potatoes.
Coffee, milk.

Dinner

Vegetables.
Sirloin steak.
Roast stuffed veal.
French fried potatoes.
O'Brien potatoes.
Boiled onions.
Creamed carrots.
Finger rolls.
Orange sherbet.
Marble cake.
Milk.

Supper

Grape nuts.
Force.
Egg salad.
Baked macaroni (plain).
Baked macaroni (onion).
Pound cake.
Peach sauce.
Iced tea.
Milk.

MONDAY

Breakfast

Pettijohn.
Saxon food.
Wheat griddles.
Maple syrup.
Scrambled eggs.
Rye muffins.
Coffee, milk.

Dinner

Beef stew and dumplings.
Roast lamb.
Boiled potatoes.
Mashed potatoes.
Cabbage.
Milk.
Buttered beets.
Lemon jelly.
Coffee jelly.
Milk.

Supper

Puffed wheat.
Corn flakes.
Meat hash.
French toast.
Currant jelly.
Currant jelly roll.
Cocoanut jelly roll.

This is an average week, and shows the variety of food and the opportunity for choice which is given a patient. Besides being able to choose between two kinds of meat, a patient can ask for that which is rare, medium, or well done. Eggs, for instance, can be served soft, medium, or hard, as with the automatic egg-boiler this is a very simple matter. The patients also have the privilege of having eggs cooked in various ways when the breakfast menu is not to their liking, although they are not on the bill of fare. This has been a feature that has pleased more than anything else and has not added much labor to the kitchen force; neither has it resulted in the preparation of an excess of food, as experience soon showed the relative popularity of the various articles of diet, and the chef prepares the amounts accordingly; nor has it increased the cost of the dietary.

The care taken in selecting meats, canned goods of all kinds, butter, eggs, etc., has been a big factor in reducing the table waste. The value of flavor or palatability is an important factor and must have careful consideration in the preparation of the food. Furthermore, it is an economical measure as well, because, when good food is attractively displayed and the quantity served in suitable portions to the individual, nearly if not all of it will be eaten and the waste reduced to the minimum. Moderate-sized portions are served, and the patients may come back for second or third helpings if they desire. We want them to leave clean plates and therefore impress upon them the necessity of taking only as much as can be eaten. In many instances the highest-priced grades of canned goods, groceries, or meats have been found to be the least expensive because, there being little or no waste, a smaller quantity is prepared. We have been able to popularize such articles of diet as hash, beef stew, minced meat, and Hamburg steak by preparing them from a good quality of meat, well seasoned, and placed hot on the counter, where the dishes are displayed in as tempting a manner as possible for the patients' inspection. These cheaper foods will often be selected instead of lamb chops or some other meat that costs much more. A frequent complaint made in institutions is the lack of variety of food. The cafeteria plan solved this problem to the satisfaction of all. The individual sees the food displayed in a tempting manner; it is steaming hot and attractive; there are two or more kinds to choose from, and the variety appeals and satisfies.

The price the patient pays for these advantages is the little effort he has to make in carrying a tray to the counter, looking first at the menu and then at the displayed food, deciding what he wants, and taking the filled tray to his table. Service is immediate, and the food is hot as from the oven or broiler and at its best. The patients come from different wards, about thirty at a time, one group following another at about five-minute intervals. We can serve about six people a minute, so there is but little time for any individual to stand waiting in line.

We expected to save some money by discontinuing waiter service, but such is not the case. Only one less man is employed, and we have found it necessary to pay higher wages and get more intelligent employees. The economy has been in the saving of food and has far exceeded expectations, not by curtailing or limiting the amount consumed, but by the reduction of the table waste.

During our financial year of 1916, eight months of which was under cafeteria service, we expended $2,700 less for food than in the preceding year. Close watch of the amount of food cooked for each meal is absolutely essential to the success of the plan. It is very easy for the kitchen to increase its waste by the preparation of too much food if

watchfulness is not constantly maintained. For this purpose it is necessary that the steward spend most of his time in the kitchen supervising the preparation and the serving of the meals. At first, because of the two meats, several vegetables, and two desserts, it was hard to estimate the needed amount with accuracy. A brief experience, however, overcame this difficulty and the chef was soon able to judge very closely the quantity that would be called for at a given meal of any article on the dietary. Steaks, chops, or any broiled meats are cut direct from the loins and cooked as needed. No more is cut off or cooked than is ordered. Canned vegetables, unopened, are immersed in boiling water and kept there until needed. Any cans remaining after the meal are taken out, cooled, and returned to stock without in any way damaging their contents.

"The proof of the pudding is in the eating" is a very old saying. We feel that the cafeteria serving has demonstrated its value. It has satisfied the patients and gained their good will. They realize that in these days of high prices they are getting better food than it would be possible for them to buy outside. They have cooperated with us in many ways. When some of the staple foods like potatoes have been so high that it was necessary to serve them less frequently, the patients have taken the substitute without complaint. Although the table waste decreased a great deal during the first year of cafeteria service, which ended the last of March, I was not satisfied, and called the attention of the patients to the considerable amount of bread, milk, and other expensive food left on the table. They responded promptly to the suggestions made, and there was a further cutting down of the waste fully 20 percent during the following two months, and the irreducible minimum has not yet been reached. The brief statement given in Table I, comparing the results obtained during the past three years, will show that our claims for economy are based on facts:

TABLE I. COMPARISON OF RESULTS IN PAST THREE YEARS

	1914	1915	1916
Average number of patients	294.57	258.81	263.78
Raw food cost per patient	$2.77	$2.436	$2.188
Cost of meats	$17,704.77	$15,460.16	$11,479.23
Cost of butter	3,218.66	2,967.36	2,594.15
Cost of cereals	318.15	406.41	684.57
Cost of sugar	972.20	1,323.88	1,378.55
Total food cost	$33,870.89	$32,876.77	$30,100.05

Increase number of patients, 1914 to 1916 ..... 12.4 percent
Decrease in food cost, 1914 to 1916 ..... 11.13 percent

MEAT REQUISITIONS

	Pounds	Average weekly
Dec. 1, 1915, to Feb. 28, 1916	27,841	2,195.
April 25 to July 17, 1916	15,871	1,378.4 (cafeteria)
Jan. 2 to Feb. 11, 1917	7,855	1,571.4 (cafeteria)
April 23 to July 22, 1917	17,685	1,360. (cafeteria)

The year 1914 was under the usual plan of waiter service. In 1915 the patients had waiter service all the year, the employees waiter service four months and cafeteria service eight months. In 1916 the employees continued under the cafeteria service and the adult patients had the same for eight months of the year, four months being under waiter service.

The staff and nurses and the children patients, of whom there are seventy, have waiter service, but their dining rooms adjoin the two cafeterias where the food is obtained. This concentrates all our dining room service as much as possible.

Notwithstanding the increased cost of all supplies, we were able to decrease our food cost 6.8 percent for our financial year ending December 1, 1916, as compared with the preceding year. The elimination of waste made possible by the cafeteria service is responsible for this favorable showing. Excessive waste may be due, first, to a poor quality of supplies; second, to unpalatable food caused by poor cooking or lack of good seasoning; third, to poor service. Many times food is said to be of poor quality in hospitals and institutions, when the facts are that the food was good, but had been spoiled by the slow service from the kitchen to the individual.

Table II shows what we have accomplished in saving waste during the past two years. It represents all waste, including liquids, except water and fruit skins, from the patients' and employees' tables and from the trays served in the wards, the total number of consumers being 345. The kitchen refuse, such as vegetable parings and bones, should be distinguished from edible waste, and for that reason we do not keep a record of its weight. The constant supervision of the steward in the kitchen, and the cooperation of the chef is a check against its becoming excessive.

TABLE II. ELIMINATION OF WASTE UNDER CAFETERIA SERVICE

	Monthly total, pounds	Daily average, pounds
1915		
June	5,247.	174.9
July	5,735.	185.
August	5,674.5	183.
September	5,543.	184.7
October	5,909.5	190.6
November	5,919.5	197.3
December	6,048.	195.
1916		
January	7,118.5	229.6
February	5,697.	196.4
*March	5,750.	185.4
	58,842.	
April	3,962.5	132.
May	3,741.	120.6
June	3,422.	114.1
July	3,553.5	114.6
August	4,064.	131.1
September	3,608.	120.2
October	3,686.5	118.9
November	3,586.5	119.5
December	3,606.	116.3
1917		
January	3,697.	119.3
February	3,337.	119.1
March	3,459.	116.6
April	2,925.	97.5
May	2,676.5	86.3
June	2,511.	83.7
July	2,487.	80.2
	54,322.5	

Decrease in waste since March, 1916, 56.7 percent.
*Cafeteria service installed for patients March 21, 1916.

A WELL-PLANNED COUNTY TUBERCULOSIS HOSPITAL

Jasper County, Missouri, Provides Modern Accommodations for Tuberculosis Patients at Moderate Cost—Some Special Features—Avoidance of Infection in Handling of Food

By RUTH K. CUMMINGS, Secretary Jasper County Board of Tuberculosis Hospital Commissioners, Webb City, Mo.

THIS hospital is situated one and one-half miles northwest of Webb City, Mo., on a forty-acre tract of land on a high elevation fronting south. It is designed primarily for advanced cases of tuberculosis and is strictly a hospital for the sick, with modern and permanent accommodations for the patients with incipient tuberculosis, and convalescents.

The foundation wall is rubble stone, 18 inches thick, faced with pitch face ashlar above the grade line. The superstructure is faced with a dark red vitrified brick backed up with hollow tile with a waterproof mortar joint between the face brick and hollow tile to obviate the dampness following the cement mortar joint to the inside face of the wall. All walls are laid in Portland cement mortar, dampproofed. The floors are reinforced concrete, with resilient composition floors in the private rooms, and a smooth-finished cement floor, painted, in the open-air wards. The heating plant and fuel rooms are enclosed with masonry walls, and the other partitions are of a slow-burning, fire-retarding material. The roof is composition supported on reinforced concrete, and over the roof proper is an extra heavy cap sheet to protect the roofing composition.

The plan of the building is crescent shape, and the center axis line is directly north and south. The peculiar shape of the building allows the maximum amount of sunlight in each room. The utility rooms are on the north side of the building.

The main entrance is in the center into a large waiting room directly connected with the main office, superintendent's office, and the examination rooms. This large waiting room is also intended to be used for midweek evening meetings.

A veranda 12 feet wide extends across the central portion, at each end of which are the patients' entrances to their respective sitting or reading rooms. On each side of the main entrance the veranda has a cover 40 feet long and 14 feet wide, giving an appearance not unlike a pergola.

This cover stands away from the building about 2 feet, and about 2 feet below the top of the front windows, thus admitting an abundance of sunlight to the private bedrooms on the first story. The windows in these front bedrooms extending to the floor are "three-run" sash windows 3 feet 6 inches wide, and, by raising the two lower sashes even with the bottom of the upper sash, the beds may be rolled out on the veranda.

Fig. 1. Jasper County Tuberculosis Hospital, Rose & Peterson, architects.

The wings at each end of the building contain the open-air wards and dressing rooms. Each ward is intended to accommodate sixteen patients and is provided with a common dressing room in which are sixteen private compartments, each containing a steel locker, in which each patient will keep his clothing, toilet articles, etc.; each dressing room also contains two water-closets, one shower, three basins, and one dental lavatory.

Each open-air ward is arranged to obviate drafts on the beds without impediments to the free circulation of air at all times. They are also provided with two rooms in which the sick may be cared for without disturbing any of the other patients.

Each private room and all open-air wards are provided with a modern silent signal system.

At each end of the building, on each floor, is a utility room provided with a modern bedpan cleaner, pan racks, etc., a large blanket room furnished with heat to keep the blankets warm for immediate use, and a linen room for daily supplies.

On each floor is a diet kitchen served with a dumbwaiter from the main kitchen, and each has, in a separate compartment, a modern sterilizing dish-washer. The food is served the patients directly from each diet kitchen, but the trays and dishes are returned to the dish-washing room, scrapped, washed, and sterilized before being returned to the dish-warmer in the diet kitchen. In the rear portion of the building, on the first floor, at the west side, are located the examination, nose and throat, laboratory, and operating rooms. On the east side is the head nurses' dining room and sitting room, which opens directly on to a veranda under which is the entrance for all kitchen supplies. The first floor is connected with the second floor with a stairway, but all floors in the main front portion are connected with easy inclines from basement to roof.

On the third floor is located the children's open-air ward and class room, on each side of which

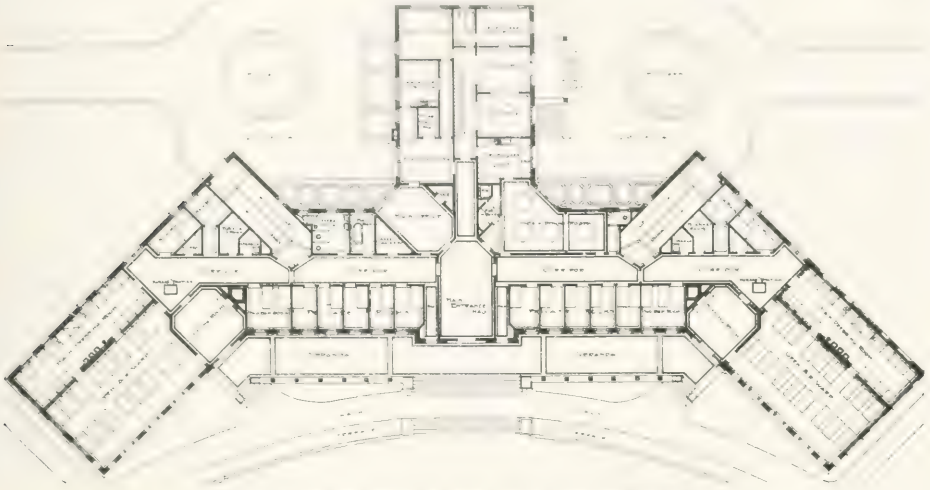


Fig. 2. First floor plan of the Jasper County Tuberculosis Hospital.

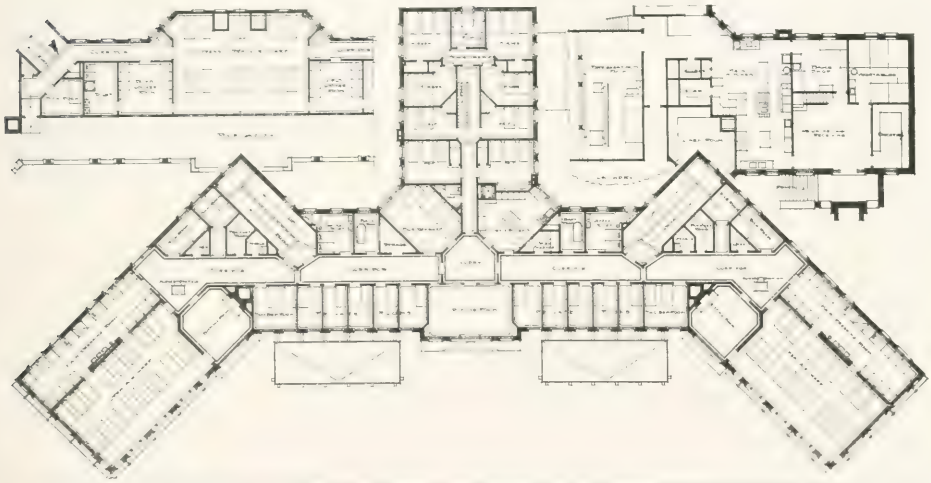


Fig. 3. Second floor plan of the Jasper County Tuberculosis Hospital, with basement plan on the upper right and third floor plan on the upper left.

are sick rooms, locker rooms, and toilet rooms to accommodate sixteen children. Immediately in front of the children's ward, extending the full length of the central portion, is a pergola with a cover to insure shade and shelter.

The entire roof may be used by the children for games.

In the basement is the vacuum steam heating plant and high-pressure steam boiler for sterilizing purposes, and vacuum cleaning apparatus, a complete laundry plant, consisting of two washers, an extractor, flat-work ironer, dry room, press, and American sterilizer, through which all soiled linen and clothes go before entering the laundry room proper; also a complete refrigerating plant with a capacity of six tons of ice per twenty-four hours, which will make all the ice required for the ice-cream freezer, packs, etc., but the large cooler and diet kitchen refrigerators will be cooled by coils containing circulating brine. The drinking water will be cooled in the same manner, and a small pump will keep the ice-cold water circulating to each drinking fountain on each floor. A complete kitchen is provided with an 8-foot range, steam cooker and stock kettle, steam and cook's tables, egg-cookers, three-battery coffee urn, ice-crusher and cream-freezer, dish-washer, vegetable sinks, etc. In connection with the main kitchen is a bake shop containing an oven, proof box, dough trough, baker's table and sink. A large room is also provided in which to receive and weigh the supplies, and store groceries and vegetables.

A special and important feature regarding the supplies and kitchen is that all supplies are received and all food is cooked and sent to each diet kitchen; all trays are served and set on the racks, and not until they have passed out of each diet kitchen are they exposed where any tuberculous inmate has been or is allowed. The dishes are then cleaned and sterilized in the sterilizing apparatus and passed back to the diet kitchen by a different route from that by which they came out.

In the basement at the foot of the incline and just inside of the west grade entrance is located an incinerator in which not only all garbage may be consumed, but also all sputum cups or boxes may be destroyed.

There is also conveniently located in this department a room into which a bed may be rolled and fumigated. It is also connected with the large vent stack so that the fumes may be quickly carried away.

Close to the side entrance door is the morgue, which is arranged for six stretchers and is directly connected with a ventilating flue, and at each end of the main building are two larger rooms with an area of approximately 2,250 square feet, which may be used as recreation or work rooms for patients with incipient cases.

At each end of the building is a nurses' station provided with a telephone, in front of which will be the signal system pilot light and from which all door signals may be seen; through the plate-glass panels in the doors direct supervision of the sitting room, dressing room, and open-air wards may be exercised without the nurse leaving the desk.

Beds for 117 patients and 21 nurses and help are shown on the plans. If the dining room shown on the second floor is used as a ward, 6 more patients may be accommodated, making a normal capacity of 123 beds. If the nurses should be housed in a detached building, using the 20 beds shown in the rear, 143 patients could be accommodated.

The building proper, including the heating and high-pressure steam plant, refrigerating plant, laundry and kitchen equipment, cooler and refrigerators, and architect's fees, cost $85,000. This is approximately 24 cents per cubic foot and $690 per bed normal capacity, or $595 per bed possible capacity. Under normal conditions of the market, for $25,000, the capacity may be increased to accommodate 100 more incipient or ambulatory patients, who would, owing to the present arrangement and locations of the utility rooms, nurses' station, etc., receive the same accommodations and protection from fire as those in the present building. This would make the cost per bed $500 normal capacity or $450 possible capacity.

It is intended, when the number of cottage patients justifies it, to build a large dining room with a grade entrance on the north or rear end of the present rear portion, extending by on each side, thereby affording north-and-south ventilation, this dining room to be connected with the present kitchen through the basement, leaving the present nurses' dining and sitting room as it is at present.

Space does not permit mention of all the special features incorporated in the building, which should be seen to be appreciated.

The growing necessity for strictly tuberculosis hospital facilities renders this building of extraordinary importance in supplying many well-thought-out features. Rose & Peterson, of Kansas City, Kan., architects of this building, have added another highly commendable achievement to the many they have designed.

All good ends can be worked out by good means. Those that cannot are bad, and may be counted so at once and left alone.—Barnaby Rudge.

STANDARDIZATION OF HOSPITALS—CLASS VI, LARGE MUNICIPAL HOSPITALS

Creation of Medical Staff Through Competitive Examination First Great Forward Move—All Other Departments Benefit—Political Control the Curse of Public Institutions—The Story of the Cook County Hospital, Chicago, as an Illustration

By JOHN A. HORNSBY, M. D., Chicago, in Collaboration with MISS MARY WHEELER, Principal of the Illinois Training School, Chicago; DR. SOLOMON STROUSE, Former Pathologist in and now Member of the Medical Staff, Michael Reese Hospital, Chicago; MISS RENA S. ECKMAN, Former Dietitian, Massachusetts General Hospital, now of Teachers College, Columbia University, New York; DR. J. T. CASE, Roentgenologist, Battle Creek, Mich.; DR. EDWARD S. BLAINE, Roentgenologist, Cook County Hospital, Chicago; MR. E. C. LARSON, Former Accountant, now Assistant Superintendent, Michael Reese Hospital, Chicago; MR. MICHAEL M. DAVIS, Jr., Director, Boston Dispensary, Boston, Mass.

THERE is no good reason why the standards for publicly conducted and publicly supported hospitals of large size should be any different from those for teaching or university hospitals of the same size, which we discussed under Class I, or those set for Class II, large semipublic hospitals supported by annual subscriptions, endowments, and earnings from patients. Nevertheless, conditions as they exist in this country at the present time will almost compel us to accept a standard for these public institutions not quite so high as those for the classes of hospitals above named. This is due not to any innate difference between the institutions, but to the state of the public mind that has not yet been educated up to a point where payment for service of the highest order in these hospitals will be countenanced by the tax-paying public acting through their representatives in the legislatures, county boards, and municipal councils.

There was a time, not many years ago, when state hospitals for the insane were a disgrace to this country; there then came a propaganda to better conditions in these state hospitals, and that propaganda was so successful in arousing the public to the necessities of a most dependent class of sick that those hospitals are now better than any similar private institutions engaged in caring for the same class of people, and one of the purposes, not the least, of the present propaganda for fixing hospital standards is to bring about the education of the people so that they will appreciate the necessity for paying for better municipal hospitals engaged in caring for the dependent sick of the several communities.

In one way it is easier to control the activities in a municipally supported hospital than those in a private institution or semipublic institution of the same sort, because we can think in terms of the best good of the patient without the need to provide such luxuries and private accommodations as we are bound to provide in semi-public hospitals that accept paying patients.

There are a few large municipal hospitals in this country that compare most favorably with any privately conducted and privately supported institution of like character, but the number is extremely small and the excellence of such few institutions is due largely to the individual qualifications and conscience and strength of character of the superintendent, or to like strength on the part of some individual connected with the government of the locality, such as a governor of the state, a chairman of the county board, or the mayor of the municipality, whose position and influence, coupled with his knowledge of present-day hospital problems, enable him to direct the activities of the institution on a high plane.

A few fundamental principles might be laid down for these large public hospitals, nearly all of which are conducted under the auspices of the municipality in which they exist; a few are controlled by the state, such, for instance, as the New Orleans Charity Hospital, which is located in the city of New Orleans but is conducted under the auspices of the state of Louisiana and which accepts patients from all parts of the state. In nearly every instance these hospitals can be affiliated with medical teaching institutions, and they certainly should be so affiliated if there is a medical school near enough for the material in the hospital to be available for teaching purposes. Nearly all of these public hospitals are amenable to political conditions in their localities, and this one factor is the prime deterrent to good hospital service, including the employment of qualified trained people. The first step toward the creation of decent standards and the conduct of the institution along the plane of these higher standards is to take them out of the maelstrom of politics. While competitive appointment, as we have often stated, is not usually conducive to best conditions of hospital service, it seems there is no other way to free this class of institutions from politics but to place their personnel under the protection of the merit system in order that the positions in

the hospital may not be open to the assault of every incoming political administration. If we can achieve this one thing, that is, the creation of a personnel that will hold over from administration to administration, it will never be wholly impossible to oust incompetent people and to replace them with trained men and women.

As a rule, the per capita cost in these municipal hospitals is not properly distributed—again because of political influence. The politicians first want to control the appointments in these hospitals, and next they want to control the furnishing of supplies, and usually this second factor is hardly less dangerous than political control of the first. If there is the right sort of supply board or purchasing agency which is itself free from the influences of politics, it will not be a difficult thing to buy supplies for the hospital on the merits of the products themselves, but where public bids must be taken on all commodities for the municipal hospital and contracts let to the lowest responsible bidders, it frequently happens that the purchasing agencies will "wink at" the furnishing of inferior commodities under a price that is supposed to bring superior goods—and, of course, the patients are the sufferers and the tax-paying public pays the bills. And yet, it seems there is no other way by which the commodities for a public hospital can be advantageously bought except through the demand of bids and the letting of responsible contracts; so that again it comes up to the conscience of the administrators of the law. The one effective way to insure a proper reckoning on the part of such officials is to create behind them and in front of them a public opinion that will not permit the delivery of cheap goods whether at a low or a high price. It is common experience with hospital administrators in this class of institutions and in the great state hospitals for the insane to have to fight for better goods under existing contracts all the time. Unfortunately, the politicians are too often unable to place the superintendent who dares to do his duty in protest against inferior goods at high prices at the disadvantage of being considered a "chronic kicker" and "out of touch with the administration," and it is usually easy to bring charges against such a man and have him removed "for the good of the cause." The corrective in this case, again, is an educated public opinion. We know splendid administrators, men of broad experience, high morals, and an excellent conscience, who have been thrown out of fine positions because they dared to do their duty in protesting, and continuing to protest, against the looting of their institutions by political contractors and purveyors.

THE MEDICAL STAFF

In nearly all the ten departments under which we have undertaken to standardize hospitals the same standards will prevail for this class and the same excellence can be demanded as we have demanded for the large teaching hospitals, Class I, and the large semipublic institutions, Class II, but the medical staff can usually be dealt with definitely and to the great advantage of these institutions.

The medical profession is quite as able to demand political recognition as the contractors and the other politicians, and, if doctors are permitted to do so, they will use their "political pull" to entrench themselves in the public hospital of the community and sometimes are extremely difficult to reach, so it seems that the only way that the medical staff of a public hospital can be freed from inefficiency, "dry rot," and political machination is to place the staff on a civil service basis. That has not been done as a rule, and the best illustration of success in an attempt to create a civil service medical staff has been in connection with one of the worst political nests that ever disguised itself under the name of a hospital, namely, the Cook County Hospital of Chicago. For many years that institution was, to our way of thinking, the worst hospital in this country and from every conceivable standpoint. About ten years ago Henry G. Foreman was elected president of the Board of Cook County Commissioners, very much to the chagrin and disappointment of the politicians. He at once saw the rottenness in the Cook County Hospital and, under the wise guidance of a small group of disinterested and altruistic medical men, headed by the late John B. Murphy, Frank Billings, A. J. Ochsner, Otto Schmidt, and perhaps a few others, he undertook to change conditions from garret to basement. He began with the medical staff, feeling that if there was the right sort of medical staff in control of the care of patients in that institution the rest of the reformation would be comparatively easy. Foreman was not permitted to carry out all of his intentions because the politicians swept him out of the presidency and out of the board at the next election, but he had shown what could be done and he is to be credited with what was done and which under succeeding administrations could not be undone, because it is a truism quite as active in politics as elsewhere, that no obviously good reform can ever be completely and permanently destroyed. Foreman's successor in the county board was a reactionary and essentially a spoils politician, but reaction again occurred out in the public mind and A. A. McCormick was made president of the county board and under his wise ad-

ministration he brought back again the medical men who had been ousted subsequent to the Foreman regime, and civil service in the medical profession was placed on a high and enduring plane. A large group of medical men, headed by those named above, joined to help McCormick create an active working staff for the Cook County Hospital, which, when completely entrenched in office, could bring about reforms clear down the line.

A scheme of civil service examination was contrived and examiners were appointed in the persons of men who were big enough and broad enough to be entirely disinterested and who could not be used by the politicians, even the medical politicians. In this examination a great number of barnacles were swept away and their places were filled by efficient younger men who had the time and the inclination to serve the public in that great institution. It was a long war to bring about these examinations and a hard fight to get rid of the medical politicians who had grown to be a part of the institution and who had been using their places there for their own personal aggrandizement; but the fight was won and a complete staff was finally created, as nearly free from political bias and political influence as it is possible to achieve anywhere.

The men on the staff of that hospital are the best men in the profession in Chicago; nearly all of them are connected with one or another of the medical schools and all the better schools have access to the hospital and the use of certain of its clinical material for teaching purposes; but the schools are not permitted to dictate or dominate the conduct of the hospital and the teaching faculties in the medical schools have no rights in the hospital as school faculty members but only by reason of their membership on the staff of the hospital as created by the board of county commissioners.

Books are kept on the members of the medical staff in the Cook County Hospital, and men automatically oust themselves from membership on the staff by inattention to duty, by failure to live up to the rules, or by absence for a certain number of days in the year. The result is that here is an activity and a liveness in the medical staff that brings to the sick an exalted service on the part of medical men and a keen and constant interest in the work.

We have gone to some length and have dilated on this one public hospital medical staff because, whereas ten years ago it was probably the worst hospital in the country, it is now probably among the very best, at least so far as the medical service to the sick is concerned. And there was one more reason why we felt justified in dilating on this particular instance, namely, to illustrate the fact so often expressed that, as the medical staff is, so the hospital will be. The high character of this medical staff and the keen interest the men take in their work have had its effect clear down the line. Of course, the new building is partly responsible for better service, but it is not solely responsible by any means. There is a new regime in the nursing force, and since the new medical staff arrangement went into effect the organization of the Illinois Training School for Nurses also underwent certain organic changes which fitted it all the better for the service of the hospital. While the warden is still a political appointee and without experience or training as a hospital man, the assistant wardens, one day and one night man, are both excellent hospital officers and are given practically a free hand in their respective departments. The other personnel of the hospital has been changed in weak spots, until now there is a very good organization and the sick are getting far better care than they ever got before, all under the stimulus of a wide-awake, responsible medical staff with Dr. Joseph L. Miller, trained in the Presbyterian Hospital administration, as the chief of staff. In this hospital all the services are represented and there are enough men in each service to do all the work, without any ornamental members left over.

Under such an inspiration as this the scientific departments of the hospital, in turn, are stimulated to their best efforts. The x-ray work, under Dr. Blaine, has taken on a very high character, the laboratories, for which specially designed space is not yet available, are, however, doing good scientific work, and even the dietitian, in the most difficult of all situations in any hospital at the present time, is appreciated and is made to realize that she is a part of the medical service to the sick.

OTHER DEPARTMENTS

In our August issue we discussed the establishment of standards in the special departments of the university or teaching hospital and these will all apply to the large municipal hospital as well.

An additional word might perhaps be said, however, in regard to the out-patient service in the large public hospital. If an out-patient department and dispensary is available in any hospital it is a definite and tangible, and dollars and cents asset to the public hospital whose patients are all dependent, and in proportion as the out-patient service and the dispensary are maintained at their highest possible character just in that proportion will we make it unnecessary to house in the hospital itself a great number of additional patients.

We have said elsewhere that a dispensary is useless unless there is a definite and careful examination made with a view to correct diagnosis, and unless there is a serious attempt made to treat patients efficiently before they go to the hospital beds. Very many of these patients can be kept out of bed and out of the hospital by careful attention, and by the maintenance of a dispensary of a high character it will very soon be apparent, even to the ignorant and dependent classes that patronize the free hospital, that they can get a real service there, and they will not only utilize that service, but they will carry out the orders that are given, they will actually take the medicines distributed to them, and they will follow the orders given.

THE SMALL-TOWN HOSPITAL—SOME OF THE BASES OF ITS SUCCESS

The Doctor Is the Prime Essential—Rigid Rules as to Routine Examination of Each Patient Necessary—Business Manager Should Be a Compound of All the Virtues—Pleased Patients the Best Advertisement

By MARGARET GIFFEN PHIFER, Wheatland Hospital, Wheatland, Wyo.

THE prime essential for running a successful hospital is a competent doctor, or doctors. Unless you have a surgeon and a physician of wide experience, who can "deliver the goods," your hospital is doomed from the start. Hospital facilities, undirected, will not cure patients. A town full of sick people wouldn't be the basis for a successful hospital. The sick folks would go somewhere else, and the hospital would stand empty if there were no well-qualified medical and surgical staff to treat them, whether that staff should number one or a dozen.

If you should come to me and say: "We have a small town of so many hundred people, and we need a hospital; how shall we go about getting it?" I would tell you: "Get the right doctor, and he will manage to get you a hospital, because he will not be content to treat your sick without it."

It is impossible to exaggerate the importance of this factor in the success of the hospital. If you are not yourself a successful surgeon and an all-around medical man, with at least ten years' experience, do not attempt a hospital in a small town, because it is essential to success that you should be in a position to have absolute control of everything that comes into your building. You cannot cut down your mortality rate by refusing admittance to the desperately ill, since these are the very cases that most need hospital advantages. You cannot allow your hospital to be termed either a cemetery or a butcher shop. Your only salvation is personal supervision of all cases admitted to your hospital, and full control as to the treatment after they have been admitted. Allow no man to work in your hospital unless he has demonstrated his good judgment and ability to treat diseases intelligently.

The type of physician who is willing to treat a case of "inflammation of the bowels" for ten days without a blood count, chronic headaches without a urinary analysis, or cough and "colds" without a sputum examination, is not the man whose assistance will be of any value in helping to build up your institution. Likewise, the surgeon (self-styled) who is willing to attempt a goiter operation, plate a femur, or do a gastro-enterostomy, when he is not capable of properly removing a normal appendix, is not the man to be desired as an associate. Nor is it wise to cater to the man who will carry a maternity case through pregnancy without an examination of the urine, or set a fracture without an x-ray plate, or do a tonsillectomy without a coagulation test or a urinalysis.

The antagonism of such physicians will do you less harm than their friendship. The other physicians of the community cannot ruin your hospital by opposing you. They *may* do it by working with you, especially if you allow them to make a "dumping-ground" of your hospital for such of their cases as are going wrong.

Have rigid rules about the routine examination to which every patient must submit upon admission, no matter how trivial the ailment may apparently be. A thorough study of every case is illuminating and well worth the time, trouble, and expense entailed; many a time it will save you what might otherwise have been a serious slip.

In the small-town hospital, as contrasted with a large city hospital, the surgeon who would build up his clinic must be conservative. He cannot afford to take a chance, except in those desperate cases in which his conscience will not permit him to refuse the chance to the patient. In the small hospital, the mortality rate is closely watched and rather generally known to the public; and every fatality counts heavily against the hospital. Many of the cases brought in have been neglected and are bad risks; but the general public makes little allowance for such a handicap to the surgeon. He can counterbalance such drawbacks only by extreme care in what he undertakes to do. "Safety first" has to be his motto. In our personal obser-

vation of small hospitals, failure to realize the importance of this consideration, more than any other one thing, has been responsible for their limited measure of success.

Next in importance to the attraction of a medical and surgical staff of ability is the necessity for the right kind of a business manager. I hesitate to enumerate the qualities this person will need, for it will read like a list of all the virtues. Common sense, enthusiasm, energy—these are absolutely essential. The business manager's vision must be broad enough to catch the merest glimpse of possibilities for expansion, and narrow enough not to lose sight of details; discreet enough to measure the true proportions of an obstacle in the way, but able also to see a goal beyond, to which a path must be found, "over, under, around, or through." The person who is capable of giving up in the face of difficulties is not capable of building up a hospital out-of-the-ordinary, in a small town, for we can prophesy from experience that the way will bristle with obstacles.

Fig. 1. A bit of the nose and throat department of Wheatland Hospital. The Wheatland Hospital, though situated in a small town, draws from a large territory. It is a general hospital, with a present capacity of forty beds. It is somewhat unique in that the one building houses not only the patients, but all doctors, nurses, and employees, the separate wings doing away with noise and confusion. The central portion of the building provides room for all offices, laboratories, and special departments, so that a patient can receive every needed attention without loss of time or convenience.

Fig. 2. The laboratory of Wheatland Hospital. The laboratory, the x-ray department, and the equipment for treatment by hot-air, baths, and electricity are all unusually complete. The hospital also has its own pharmacy, electric light and power plant, steam laundry, carpenter and plumbing shop, and animal clinic for experimental work.

In regard to the size of the town, anyone will concede that a town of eight hundred or a thousand people cannot alone support a well - equipped hospital. In the first place, it would be almost a miracle if the hospital received the undivided support of the entire community, and, in the sec-

ond place, even if it did, the undivided support of a town of that size would not be sufficient. If such a hospital thrives in such a town, it must have sufficient attraction to draw patronage from the outside.

The fundamental basis of that attraction must be a higher percentage of relief and cure than the patients within its reach can obtain elsewhere.

Fig. 3. A glimpse of the operating room. While all classes of cases are handled in Wheatland Hospital, two-thirds of the work is surgical, the field of general surgery, both major and minor, being pretty well covered.

In the beginning, the field of the hospital will necessarily be limited to its immediate environment; but the higher the percentage of relief, the more rapidly will the reputation of the hospital spread. It is possible for a hospital in even a very small town to draw from a wide area.

The whole country is becoming slowly but nevertheless surely converted to the hospital idea: that the hospital is the only place in which the sick can get accurate, scientific diagnosis, and modern, up-to-date, humane treatment. A well-manned, well-equipped hospital is bound to win public recognition.

The best advertisement that a hospital can have is a pleased patient. If you can send out 98 percent of your patients with smiles on their faces and good words for your hospital, you have the makings of success.

Fig. 4. An open-air sun porch. The hospital [illegible] having a sun porch which is attractive, sunshiny, and sheltered. The climate of Wheatland [illegible] to use this porch throughout most of the year.

Require your hospital staff to keep their dignity and command respect; but choose your assistants, nurses, and employees with a view to their ability to make friends. No matter what his or her capability along other lines may be, an employee of an unpleasant or unattrac-

tive personality is a positive detriment to your institution, and such handicap should be avoided.

Do not try to make a reform school out of your hospital. In the small place, you cannot have rigid rules for the conduct of the patient or his friends; and such rules as are absolutely necessary must be enforced with tact and discretion. Simple kindness is invaluable in a hospital. Never forget that it is important to please the family as well as the sick person. They outnumber your patients, and should every one go away "boosters" for you.

Make your hospital as attractive as possible. It is not enough that it should be cheerful, sunshiny, and health-giving. It must have an aura of home about it, something human and warm. Have a meeting place, "a living room," for your convalescents and their friends; help them to get acquainted with each other; make them feel that they are all fellow guests under your roof. Lasting friendships will be formed that will keep green the memory of your hospital. As one departing patient remarked the other day: "I never heard of coming to a hospital to have a good time, but I feel as if I had been on a vacation."

In the matter of equipment, needs will vary; but do not forget that the small-town hospital must be more complete than the city institution of several times the number of beds, because in a small town the hospital has to be sufficient unto itself. It has no outside source upon which it can draw in an emergency. Have all the equipment that you can afford and a little more—provided you can use it. An idle piece of apparatus has very little advertising value. Never be content with present attainments. Keep on learning, keep on buying, keep on growing. As your hospital grows beyond the scope of one man's ability to do the work, secure dependable subordinates. One department must not lag behind the others. A competent, conservative surgeon and a skillful diagnostician and medical man you must have; but you must have good nurses, too, and an anesthetist, and a pathologist, and a roentgenologist.

Each hospital must, to a certain extent, work out its own salvation along individual lines, emphasizing special features, and choosing its own publicity methods. No hospital will go far wrong if its constant aim is "Better service to the sick."

RECLAMATION OF THE REJECTED CANDIDATE FOR THE ARMY*

What We Face in the Great War—Need of Plan to Replace Tremendous Wastage in Army—Saving in Reclaiming Men With Slight Defects

By JOHN H. QUAYLE, M. D., Cleveland, O.

YOU probably have heard more or less of the reclamation plan to reclaim the unfit not only for military service, but for efficient citizenship. In the first place, I want to give you my opinion of the difficulties that we face in the war in which we are now engaged. Personally, I feel it is up to the United States to win this war or to pay tribute to the Prussians for at least the length of the lifetime of the members of this assemblage.

I saw the last kaiser's parade prior to the war. In order to see it we had to stay up all night and be on the field at five oclock in the morning, and at six o'clock exactly (not at one minute past) the kaiser rode onto the field with his staff and reviewed 2,500,000 men, who passed before him as one man, and he sat on his horse from six o'clock in the morning until two in the afternoon without moving except to salute. I saw this same parade ten years before, and I want to say that there was as much difference in these two parades as there is in the automobile of today and the one of ten years ago.

In this setting, imagine several Zeppelins flying overhead, and from 50 to 100 monoplanes operating above us—monoplanes which could get off the ground in a distance of 100 feet, equipped with motors of 450 horsepower.

I also had a pass to the flying grounds at Johannesthal, which I visited during my stay in Berlin from one to three times per week. At this time there had been a Frenchman who had flown upside down, done the loop-the-loop and other stunts, as you saw Ruth Law—a mere woman—not a soldier, do in Cleveland in the past ten days. This was being imitated by the German officers at the flying grounds, and during my stay in Berlin there were over fifty men killed from attempting these same stunts and not a single Berlin paper mentioned one of these casualties. One night, when I came out on the grounds, I saw a wing drop off an aeroplane which was 3,500 feet in the air, and these poor fellows hurtle to death, without a single man who was in the air coming down to see the accident. Within two minutes of the time the aeroplane struck the ground and had torn the arms, legs, and heads off the men, there was not a sign of an accident, as the ambulance had run out from the side lines and picked up the

*Read before the American Hospital Association at its nineteenth annual session, Cleveland, O., September 12, 1917.

pieces and the motor truck from the hangar had gathered up the pieces of the aeroplanes.

This is the military spirit that permeated Germany prior to this great war. We all hold the fond illusion that there will be internal troubles in Germany, and the President has encouraged this hope in his wonderful reply to the Pope; this has strengthened us in believing that civic conditions in Germany would win this war for us without loss of life to us, and all we needed to do was to furnish the allies sufficient money and they would win the war; but I want to say that my own opinion, based on familiarity with the psychology of the average German, is that the child is brought up first learning to speak the word "kaiser," second, "fatherland," and way down the line, "Gott," and later, "father and mother," and they would not think of attacking the army any more than we would something we know is wrong. This is what we have to combat. In my opinion, with the extraordinary efforts which are being made by the government at the present time, it will take us from five to ten years to overcome the common foe. It is perfectly true that some of our newspapers win the war each morning, and in the afternoon arrange the terms of peace, but the Germans fight on without any fuss or feathers, and undismayed.

A full realization of the meaning of man power and the tremendous wastage which is taking place in our army is the thing that prompted the reclamation plan, which I have presented to the government. The reclamation plan is nothing more or less than the simplest form of prophylaxis.

Senator Pomerene has introduced a bill in Congress providing for a hundred millions of dollars to carry out this plan, which, from the best figures obtainable, will reclaim at least 2,000,000 men, who will be ready and willing to fight, and each of whom has the psychology of a soldier and will be a real soldier when he goes to the front.

The Surgeon-General's report, which I have on my desk, for the fiscal year ending June 30, 1916, shows that four out of every five men who volunteered for the army during 1915 and 1916 were rejected for causes trivial and absolutely remediable in the great majority of the cases.

I have also the Adjutant-General's report for the month of March, 1917, during the time at which the flower of American manhood was volunteering for service and to fight this common foe—when so many men were volunteering that the colleges were being broken up—and during this month of March, 1917, only one out of three of the men who were conscientious and believed themselves physically fit to go to the trenches and fight were able to pass the physical examination of the army. What is wrong? What is the matter that this thing should happen in America, who prides herself on being the greatest people in the world? There is only one answer, and that is—lack of universal military training.

The majority of the boys from the ages of 18 to 21 years are learning to drink and contracting venereal diseases; they do not know the meaning of the word "discipline," and, when they are subjected to it, rebel. Universal military training, in my opinion, will do more for the physical, moral, and mental condition of the individual than it will for militarism.

The bill introduced by Senator Pomerene provides that a commission shall be appointed consisting of medical, civilian, and military men, who shall determine where the camps shall be located, and, when a man is rejected either by the examining board or at the cantonments, he will be referred to a board appointed by this commission, who will take him to a first-class hospital where an absolute diagnosis can be made, based on x-rays of the chest, and the different blood and serologic examinations; an absolute prognosis will be made for this man, whether he can be reclaimed and made a real fighting man within a period of time varying from one to six months. If he can be, he will be accepted by the reclamation camps and his difficulties remedied by medical and surgical science, and, if it is not possible to reclaim him, he will be given his examination reports showing his physical deficiencies, so that he may go to a doctor (who possibly would be unable to make all of these examinations without great expense), but who is perfectly capable of treating him, thereby producing a fine citizen at the best time of his life, namely from 21 to 31.

It is my idea that these camps should be located near the large cities, which can furnish the best specialists in every line to make these examinations and do the operations, and, after the patient's recovery, he would be returned to the reclamation camp, which would be adjacent to the city, where he would live an outdoor life, on a simple diet, *under discipline* and the proper regime that would make him a real man.

I have every reason to believe, from the correspondence and the interviews between Secretary of War Baker, Senator Pomerene, Surgeon-General Gorgas' office and myself, that this bill will be passed as soon as the government is able to equip the men under the selective service draft.

You may say that this reclamation project is not necessary, but I want to say to you that there are two forms of examination, the white book, which was prepared under the authority of the President and the Secretary of War for the guid-

ance of the present civilian examining boards, and the blue book, which is the regular army examination and which examination every man has to pass when he arrives at the cantonments, and it is my personal opinion that a large percentage of the men who are sent to the cantonments will be returned as physically deficient.

If I had more time I would be glad to go into the subject of the causes of rejections from the army, and in conclusion I want to say that in Canada for every man who was broken down in training it has cost her $2,000. We have figured that it will cost $50 to reclaim each man. If with a hundred millions of dollars we reclaim 2,000,000 men, as H. P. Davidson, head of the Red Cross, has aptly put it, "you have increased our national wealth thirty billions of dollars."

PLACING CRIPPLES IN INDUSTRY

Sympathetic Oversight and Encouragement Necessary—Work of the King's Chapel Committee for the Handicapped

BY ELFRIDA RIGBY, Placement Worker, King's Chapel Committee for the Handicapped, Boston

It is within very recent years that scientific methods and even ordinary care have become recognized as essential in selecting men for employment in modern business houses. With the recognition of these facts the necessity for vocational training and the almost greater necessity of vocational guidance have been impressed on the employers and educators. As this has been found to be of great importance with the physically normal, how much more essential must it be to those who through some misfortune have been deprived of their full faculties.

Until very recently the cripple has been the object of hopeless and helpless pity, and even now it is rarely considered possible that he may become an economic asset to the community. To make and prove him such has been the work of the King's Chapel Committee for the Handicapped, and experiences of the last five years have justified the belief that this is possible.

The first thing to be done is to convince the cripple that it is in his power to become a wage-earner and a thorough physical examination is insisted upon in order that the correct idea of his full capabilities may be formed. Frequently special training is advised. It is found that if a cripple is to compete with a normal person for a position he must have some special qualifications to make him preferred before the latter. He must be quicker at figures, pleasanter in manner or disposition, defter with his fingers, show better judgment than his more fortunate fellowman, for it is only on account of his worth that he will be employed. It is a business proposition with the employer, and to be on a firm foundation a placement must be recognized by those working with the handicapped as a business deal.

A position is obtained usually through personal solicitation, the limitations of the patient being fully explained to the employer. When once it is secured, however, it is not sufficient to leave the cripple to sink or swim. He still needs careful and sympathetic oversight, someone to encourage and admonish, until such habits of industry, self-reliance, and independence are formed that supervision is no longer necessary and he has learned that he can turn to the bureau as a friend whenever serious difficulties arise.

Occasionally a first placement does not prove to be the best adjustment; then a second and even a third is undertaken before a patient is finally dropped as uncooperative. All are made to feel that they should contribute something to benefit the large number of fellow cripples, and that to succeed in their own work is the surest way. It is the one way of gaining the cooperation of employers and perhaps another opportunity for a handicapped person in the future.

The following are two stories of patients helped by the bureau:

D. P., 44, is almost a dwarf, as a result of scoliosis. He came to this country a few years ago and found employment himself, but in spite of a good record, he was obliged to give it up, as the constant lifting involved was too great a strain on his back. He succeeded in finding other work, but it was even more laborious, and, although he had been furnished with a brace, he left and returned to his first place. He received $12 a week, but more on account of his faithful service than his ability. Again, after a short trial, he found the work too hard. Finally he came to the committee, asking them to help. A position was found for him at which he is able to sit all day. He no longer suffers as formerly and is earning the same wage. The employer, after a week, reported that the patient was becoming quite "frisky," and the patient himself said he never realized that work could be so light, and that he will remain with the firm as long as they will have him. He has been offered more money by his first employer, but has refused it, having once enjoyed work with freedom from pain.

Fanny was a quiet and attractive girl in her twenties, who had her right arm amputated above the elbow as a result of an accident suffered while working in a laundry. She was anxious to earn something at once, as her parents were dead and she and another sister had several younger brothers and sisters dependent on them alone for support. An opportunity was found for her to learn to operate a telephone switchboard and as soon as she was proficient, a position was secured by the placement worker in a private hospital to work nights. She started at $20 a month with board, which with her compensation was as much as she had earned previous to her accident. Her service is perfectly satisfactory and the girl herself is much happier doing something, and at the same time she is no longer worried over her financial difficulties.

The work of placing the handicapped in industry is a matter of intensive and extensive education of the cripple, his family and friends, and also the employer. It cannot be done quickly or in a wholesale manner, but it can be accomplished because it has been accomplished, and all should do their share to promote interest in the movement, especially in view of the serious problems likely to face the country now it is at war.

The experience in Europe has shown that the matter of employment and medical treatment are very intimately related. Would it not be well for hospitals and clinics to see if they cannot render still greater service to their communities by saving not only the lives and limbs of their patients, but also their economic and moral value? Let them form bureaus similar to the King's Chapel Committee for the Handicapped.

A good deed is never lost. He who sows courtesy reaps friendship, and he who plants kindness gathers love.

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Editorial Office . . . . . Conway Building, Chicago
Business Office . . . Metropolitan Building, St. Louis

EDITORS.

Henry M. Hurd . . . . . Fidelity Building, Baltimore
Frederic A. Washburn . Mass. General Hospital, Boston
Winford H. Smith . . Johns Hopkins Hospital, Baltimore
S. S. Goldwater . . . . Mt. Sinai Hospital, New York
W. L. Babcock . . . . . Grace Hospital, Detroit
John A. Hornsby . . . . . Conway Building, Chicago

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The Fixing of Standards

The Hospital Standardization Conference, held in Chicago October 19 and 20, under the auspices of the American College of Surgeons, was, to the hospitals of this country, the most important meeting that has ever been held.

For years we have been attempting to obtain a point of approach to the problem of standardization; committees have been appointed from the American Medical Association, the American Hospital Association, the Clinical Congress of Surgeons, and other organizations, to study the problem with a view to getting hold of a starting point from which some definite results could be obtained. Almost insuperable obstacles have presented themselves, and, in spite of some hard work and some careful thinking on the part of a number of leaders in the medical profession and in the hospital world, we have really arrived nowhere.

The meeting at Chicago brought together a large number of very prominent medical men in all branches of the profession, and some of the leading hospital men of the country, including the presidents of the two large associations. Announcement was made that the American College of Surgeons had been given a considerable fund, amounting to about $60,000, for the purpose of undertaking the work of obtaining some hospital standards by which better service in the hospitals could be attained in the easiest and most helpful way.

Included in the story of these Chicago meetings is a list of a general committee of twenty-five men from all parts of the country to act as a consulting board to prepare some formulas and to begin and carry along the work. It is intended to begin the making of personal inspections of hospitals, inspections that must be more or less crude at first, but which must be, of their very nature, most helpful and instructive. As the work goes along these inspections will attain more definiteness and the hospitals will be classified.

THE MODERN HOSPITAL bespeaks the cooperation and participation of boards of trustees, superintendents, medical staffs and departments of all the hospitals in this work. It may be stated with the utmost assurance that there is no disposition or desire to hurt any hospital anywhere, but only to help.

Many boards of trustees are quite well satisfied with conditions in their own institutions, and this attitude is probably the greatest obstacle existing at the present time to the betterment, by superintendents and by medical staff members, of conditions in the hospitals. With leadership in the work of standardizing by so responsible a body as the American College of Surgeons and its general committee, it is certain that the eyes of trustees are to be opened in regard to the conditions in their own hospitals, and the next step will obviously be improved conditions.

Open-Door Hospitals

It developed at the hospital standardization meeting of the American College of Surgeons that medical men working in the hospitals of the Pacific Coast are dissatisfied with conditions existing in the far west institutions because of the absence of responsibility for the scientific work being done in them. It appears that there are no medical staffs on the Pacific coast, and that any doctor in the community is entitled to treat his private patients in almost any of the hospitals without let or hindrance. It seems also that this wide-open policy has made it possible for the most arrant quacks to go into good hospitals and practice the most arrant charlatanism. Some exceedingly good hospital administrators believe in the open-door policy, and, obviously, trustees of these hospitals believe in it because it is in the interest of the financial success of their institutions. A hospital, for instance, that has two hundred doctors interested in sending patients to it will not want for financial support by way of fees from patients.

But this policy leaves so much to be desired in

the efficiency of the hospitals that the time must come, and that soon, when better system must be employed if the demands of modern medicine are to be met, and these demands can be met only if the scientific work in the hospitals is under the control of qualified and ethical members of the medical profession. In order to fix such control, it is necessary that, in every hospital, some sort of medical board be instituted that will have the authority to prescribe a definite technic under which approved medical procedure can be done. It makes no difference whether this medical board be called a staff or an auxiliary to the trustees, or something else; but it is absolutely necessary that there be some authorized control and that somebody, somehow, shall be responsible for the kind of work being done in the institutions.

There is a widely prevailing notion that the creation of a medical staff for a hospital means that no one except medical staff members may treat patients in the hospital. Nothing is further from the fact than this. With the most tightly closed staff any reputable practitioner may treat his private patients in the hospital, the only proviso being that he must employ means and methods of procedure that are approved by our modern knowledge of medicine.

Every hospital should have a medical staff, and there should be on this staff representatives of all the branches of medicine—a sufficient number of representatives in all the branches to do the free work, or, as we call it, the service work of the institution. There should be a regularly organized representation of each service with a chief at the head of each, and these service staffs should be quasi-administrative in character, at least so far as the medical service of the institution is concerned. These service staffs should prescribe rules for procedure in their several services. For instance, the surgical staff should prescribe, in definite printed rules, a technic for the operating and dressing rooms and for the care and treatment of surgical cases; and every man not on the staff who comes into the hospital with a private patient of his own should be compelled to operate under these rules. Otherwise, there can be no technic of any kind in a hospital; the interns cannot possibly be trained, nor can the nurses. Where every man is permitted to do what he pleases in the way that he pleases, the practice in the institution will become absolutely chaotic; there cannot possibly be a decent asepsis or a decent operative procedure, or a decent after-care of patients.

It has been said that by the operation of a closed staff many practitioners in every community, having large private practices, will be debarred from the privileges of the hospital. This, of course, is not true, but practitioners will be debarred from doing bad and unnecessary surgical work and from practicing medicine in ways that are obsolete or not in accord with the modern science of medicine.

Hospitals of the South

In this day, when the light of publicity is being thrown into the hospitals of this country, and when the public is being educated up to what a modern hospital ought to be, it is developing more and more clearly that the hospitals of the South are not maintaining the same ratio of progress as institutions in the North, East, and West.

This situation must be cured, and the hospitals of the South and leaders in every walk of life must bestir themselves and bring about better conditions in their institutions for the care of the sick. To our way of thinking, one of the most fundamental reasons why the South has not progressed so rapidly during the last two score years as other parts of the country is that the care of the health of the people has been neglected. No community that has not health can possibly be prosperous; a very large percentage of sickness is preventable. Without the stimulus of a good hospital, medical men grow lackadaisical, indifferent, and eventually rusty as to their skill and ability, and employ their time and talents exclusively for the cure of disease rather than a large part of it in measures for prevention.

Wherever there is a good hospital, conducted by a well-trained administrator, under the auspices of an ambitious and enterprising group of medical men, there is bound to come a most wholesome and healthful state of social welfare in the community. Those in charge of the hospitals of the South, those who hope or expect to benefit financially, morally and spiritually, or physically by healthful conditions, therefore, should bend every effort in the next few years toward getting better hospitals.

There are in the South a few places where the benefits of good hospitals are being demonstrated. There are a few hospitals in the South of splendid modern architecture, well adapted for the purposes for which the institutions are designed. There are a few communities thoroughly well organized in the work of their hospitals. These examples ought to be studied by other communities and the whole South should benefit.

Medical Men in the War

Announcement has been made by the Surgeon-General of the Army and by the Surgeon-General of the Navy that a sufficient number of medical

men have volunteered their services as officers in the Reserve Corps of the two branches to meet all the requirements for the first army of a million men. It has taken approximately fifteen thousand medical men out of the civil life of the country to do this.

The medical profession of this country is to be sincerely congratulated upon this splendid showing. Not one of these fifteen thousand men has joined the colors without making a serious and substantial sacrifice, and it is in keeping with precedent in the medical profession that its members have not hesitated one moment to rush in wherever they heard the call of distress or where there was need for the care of the sick. That the need in this case is felt by the government itself in no degree lessens the meed of praise to be bestowed.

Soon after the first of the year the enrollment of the second million men will be commenced, and it is announced authoritatively that approximately twelve thousand more medical men are to be needed. Already there is abundant assurance that the call will be heard and the response generous and immediate.

This is an hour of critical and extreme anxiety for our country. The response to the call of the country from every walk in life, men, women, and children, has been more than generous. This war has developed a patriotism that we in our ease and luxury of prosperity had not even suspected, and it is a proud day for us of the medical profession and for us of the hospital world that our share has not fallen behind and that there have been no slackers.

War Prices Versus Waste

It makes not quite so much difference that prices of commodities have soared as one of the results of the war. There are many compensations for these high prices. It does make a vast difference, however, whether the same wasteful practices are maintained that were the habit of most hospitals in a less unusual and more prosperous hour.

Many hospitals have installed systems by which greater economies could be practiced. In many institutions food supplies have been put on a day-to-day schedule, with the pounds and ounces carefully measured and recorded. In other institutions, less systematic but quite as rigorous schemes have been designed and put into practice by which waste clear down the line has been measurably cut down. But not enough of this has been done, and today the hospitals of the country are wasting vast quantities of expensive materials, not alone foodstuffs, but medical and surgical supplies, consumable janitors' supplies, and laundry materials.

Many of us are using today in our institutions precisely the same materials that we used before the war, such as potash soaps, woolen fabrics, and the like. Potash is now prohibitive in price, and soda soaps must be used as substitutes; blankets and other woolen goods that were formerly used pure should now be changed; wool from the sheep's back is now worth fifty cents a pound, which is a prohibitive price for hospital blankets and other woolen fabrics, and there is no doubt whatever that fabrics containing large percentages of cotton can be used most advantageously, provided better laundry conditions are instituted —conditions that will permit the proper laundering of so-called cotton blankets and things of that sort. Administrators should inform themselves as to the care of cotton goods and the best methods of saving on all sorts of hospital supplies. Vast economies can be practiced if the superintendent will study his and her problems and meet them according to modern methods.

Service Flags for Hospitals

In another column will be found a most interesting story by Dr. Charles H. Young about the service flag flying over the Presbyterian Hospital, New York, showing in stars the number of the workers in that hospital who have joined the forces for the war.

It will be noted that service flags are flying from many office buildings and factories, all over the country, showing the number of those employed in the various establishments who have gone to the war.

Every hospital in this country should have its service flag, and we can rest assured that the hospitals will make as good a showing as any other class of institutions, industrial or otherwise. Dr. Young's 192 stars is a magnificent expression of the patriotism of the Presbyterian Hospital. Are there not many other similar institutions in the country that can show as proportionately large a number who have given their services to the country?

Wonderful is the way in which people will go upon the slightest observation, or often upon no observation at all, or upon some saw which the world's experience, if it had any, would have pronounced utterly false long ago.—Florence Nightingale, "Notes on Nursing."

I am not ashamed of being an optimist, for optimism means faith in life, in your fellow-men, the justice of your cause, and the moral government of the world.—Mr. Prothero.

HOSPITALS OF THE UNITED STATES TO BE STANDARDIZED

American College of Surgeons Holds Great Meeting in Chicago to Launch Movement to Better Hospital Conditions—Many Notables Present—Large Permanent Committee Appointed—Proposed Work Outlined—Story of the Meeting

The most important meeting for the hospitals of this country that has ever been held occurred in Chicago on Friday and Saturday, October 19 and 20, unfortunately, too late for a full account to be published in our November number. Only the first paper read at the meeting, that by Dr. John A. Hornsby, was available at the time; four other papers, vital to the purpose of the meeting, are published in this number. The sessions of this meeting were held in the Congress Hotel, Chicago, and occupied all of the two days of Friday and Saturday, the Clinical Congress of Surgeons of North America and meetings of the regents of the American College of Surgeons following on four days of the next week.

To this meeting were invited about 350 people, including Fellows of the American College of Surgeons, prominent internists and other specialists in the medical profession who were known to be specially interested in hospital problems, superintendents of prominent hospitals of the country, presidents of the two large hospital associations, and editors of the leading medical and hospital journals.

Nearly all those invited were present when Dr. John G. Bowman, director of the American College of Surgeons, called the meeting to order on Friday morning, October 19. Dr. Franklin H. Martin, the general secretary, was prevented from being present by serious illness.

The meeting did much to clarify the problems of standardization, and all those who attended were far better informed as to the views of all interested groups, when the meeting closed, and went back home enthusiastically determined to help carry out the program agreed upon, and to use all their influence with their local hospitals in the interest of improved hospital conditions.

The meetings were most enthusiastic from every conceivable standpoint, from the drop of the gavel on Friday morning until the close of the dinner with which the meetings ended on Saturday night, and the feeling was unanimous that for the first time in the long propaganda for the standardization of hospitals there was a fair promise that something definite and in detail was on the way to accomplishment. The enthusiasm at the meeting was emphasized by the fact that nearly every one invited was present, excepting about fifty or sixty who responded by letter saying that they were in the service of the army or of the navy and unable, for that reason, to come. Some of those in attendance were from the Pacific coast, some of them from the farthest points of Canada, and many from the extreme south, besides, of course, a large contingent from the Atlantic seaboard. Geographically, it was a most representative meeting, every part of the country and every hospital interested being represented.

Wisely, the program had been divided into three parts:

1. The hospital problem of today, what it is, as to property and value of the hospitals, their cost of administration and the work they are doing.

2. What has the medical profession a right to expect of the hospitals that they are not now doing?

3. How are these results to be brought about?

When the morning session of the first day's session was called to order, Dr. Bowman, presiding, stated the purpose of the meeting and the intention of the College to make standardization of the hospitals its central activity and thereby to advance not only the public welfare, but also those ideals of service of which the profession has long been justly proud.

A significant feature of the conference is that it is not to end in mere talk. It laid ground-work for action. As soon now as a General Hospital Committee appointed by the Regents of the College approve some details of the plan, the hospitals of the continent will each be sent a statement of the scope of the work and will each be invited to become a factor in a great cooperative program directed toward better hospital conditions. That is the initial step. A minimum standard of efficiency which a large proportion of hospitals either now do meet or can easily meet will then be determined upon and serve as a guide and incentive for further progress. The basis of the plan is that it be an evolution of steady and inspiring headway among hospitals.

After the reading of Dr. Hornsby's paper, in which a large number of figures were given as to the number and ratio and character of the hospitals of the country, Dr. Edward Martin, of Philadelphia, who has done so much for the hospital and medical progress of Pennsylvania, took up the topic. He said something of what Pennsylvania has done under the administration of Dr. John M. Baldy. He did not say that he himself had had much to do with the propaganda for better standards in his state, and he did not tell of his part in the creation of the Philadelphia Hospital Council and the wonderful work which that coun-

WHAT THE HOSPITAL STANDARDIZATION SESSION ACTUALLY DECIDED ON

1. The appointment of a general committee of twenty-five to act as a consulting body to help in the preparation and carrying out of the plans of standardization under the direction of the College, the committee being made up of the officers of the College, nine surgeons, five internists and laboratory men, four hospital administrators, the President of the American Hospital Association, the President of the Catholic Hospital Association, and one representative from each of the army, navy, and public health services of the government.

2. The appointment of a general committee in each state to have general charge of the work of the state, including the creation of a subcommittee in each county and each municipality.

3. Inspection of the hospitals of the country by trained men working under a definite questionaire and schedule to be prepared by the general committee of twenty-five above named.

4. The tabulation and publication of the results of these personal inspections under the auspices of the American College of Surgeons.

cil had done in advancing various standards in hospital practice. He did say, however, that he thought the medical profession had been largely responsible for hospital betterment during the past decade by reason of its demands for the better care of the sick. He gave a very graphic story of the development of the hospitals of this country, beginning with the basic principles of pronounced charity and going through the communal and city hospitals, the state hospitals, and then what he was pleased to term the altruistic hospitals. Some of the greatest gifts that had been made to hospital development, he said, were from men and women, very miserable themselves, in point of health, who were hoping by gifts of money to make life less miserable for others. Then he spoke of the teaching hospital, in approach to the medical school; he thought there had been very great improvement made, due to the necessity of the schools for teaching material, and with the necessity for teaching material the necessity to use better methods for the care, cure, and comfort of that "material." He spoke also of the scientific research hospital, qualifying his appraisal of this institution by a hint that sometimes in the enthusiasm for research the medical men, as well as the hospital, had forgotten the sick man and had thought only of the use of him in the general cause.

Dr. Martin's last and final development of the hospital was as the private institution, and he here paid a glowing tribute to E. C. Codman, of Boston, and the contributions he had made in the interest of the sick, in his demand for "end-result" data and the fixing of responsibility in the treatment of patients. In the final evolution of the hospital, Dr. Martin resolved his appraisal into terms of dollars and cents, since he thought that nowadays the life and health of a man might be considered almost as valuable as the life and health of a cow. Dr. Martin quoted an authority who said that the young medical man emerged from school actually worth only twenty percent of his potential value to the community and that an additional percentage could be added to his value by postgraduate training in a good hospital; he thought that by improving the standards in the hospital the percentage of value to the community of this young medical man could be immensely increased. Dr. Martin also spoke of hospital superintendents and the need to train them because he thought the superintendent was the most vital factor in the efficiency of any hospital; he advocated one or more schools in this country for the clinical training of hospital administrators—a recommendation that promises to be developed in the program of hospital standardization by the American College of Surgeons in some definite way. More specifically, Dr. Martin urged that arrangements be made, against the declaration of peace for the intensive training of some of the young medical men who will be coming home from the war—training in executive work, in hospital administration. Dr. Martin urged medical men as the hospital superintendents of the future, because it was his idea that the superintendent was a man who should conduct the hospital and not the board of directors, and it was his idea that if this man were a medical man who had had careful training in a school for hospital administrators he would be able to give the medical practitioners in the hospital what they needed for their patients. Dr. Martin also spoke of the great need for complete and proper records of cases—if the hospitals are to be improved.

DR. OCHSNER GETS DOWN TO BUSINESS

Dr. A. J. Ochsner, in that decisive way that he knows so well how to employ, proposed the following resolution:

Resolved, That a committee be appointed to report on next Friday afternoon, at a meeting of the American College of Surgeons, in the fullest practical detail, on the organization of a school for the training of hospital superintendents; that Dr. Edward Martin be made a member of this committee, and that Dr. Bowman, who had done so much for the inauguration of the work of standardization, be made chairman.

This resolution was unanimously adopted and the appointment of the other members of the committee was deferred.

Dr. James E. Moore, member of the faculty of the University of Minnesota Medical School, Minneapolis, said that the hospitals of the country were "bad enough, God knows," but he was quite optimistic and gave a very graphic picture of the improvements that had been made in the hospital world in his own professional day. He told what the hospitals were thirty-five years ago, when they were hospitals "only by courtesy," very inferior boarding houses for the sick. Then he compared these hospitals with the present-day City Hospital of Minneapolis, with its 700 beds, and with the hospital of the University of Minnesota Medical School, "one of the most complete little hospitals in the world." Dr. Moore thought it would be quite as easy to standardize hospitals as it was to standardize medical men, and speaking for his own state and the work that the University of Minnesota had done, he was quite sure that medicine and medical men had been measurably standardized. Dr. Moore paid a high compliment to Dr. L. B. Baldwin, superintendent of the University of Minnesota Hospital, who, he said, was a positive "joy" and very much alive to the needs of the medical men practicing there.

Dr. Edward P. Davis, of Philadelphia, spoke of how the board of licensure of his state had served the whole country by placing on the statute books a provision that every general hospital should maintain a maternity service, which carried with it a provision that every resident doctor, intern, and nurse, qualifying in the hospitals of the state, should have an adequate training in maternity work. He thought that provision, if adopted elsewhere, would do more for the conservation of health and life than almost any other one thing that might be mentioned.

SMALL HOSPITALS HAVE A SPOKESMAN

Dr. Edward Jackson, of Denver, said he thought that any proposed scheme of standardization should keep in mind the best good of the great proportion of the 8,000 hospitals that had been mentioned earlier in the day—hospitals which were very small, which were increasing very rapidly, and which were extremely serviceable to their communities. Dr. Jackson would not minimize the influence a well-trained, conscientious superintendent could have on his hospital, no matter what the other personnel might be, but he thought also that very many hospitals were extremely weak in the matter of their medical staffs; a very common fault, in his opinion, is a "large, irresponsible staff that is in no way organized," and he thought that any scheme of standardization should take into account the training of the superintendent, the character and number of the medical staff, with relations to the number of beds in the hospital, the organization of that staff, and should also include definite requirements for case records.

PACIFIC COAST HAS NO STAFFS

Dr. Andrew S. Lobingier, Los Angeles, Cal., apologized for the fact that on the Pacific coast there were practically no organized medical staffs in hospitals. He thought that was due to the fact that the country was new and in more

or less of a chaotic condition, and to a pretty widespread feeling on the part of the people that hospitals are "hotels for the care of the sick." Indeed, he said that one of the largest hospitals of his own city, for the past ten years, had actually advertised that it was a hotel for the sick. He thought that different communities had different problems, and these problems would have to be met in different ways; he knew perfectly well that the prevailing idea on the coast, that the hospitals were hotels for the sick, was wrong, but he was sure it would take time, education, and great effort to overcome that attitude.

Dr. William H. Wilder, of Chicago, a professor in Rush Medical College, thought it was anomalous that medical schools should require a fifth or hospital year before graduation unless there was a stronger medical control of the hospitals in which this fifth year should be employed. He thought that not only was it necessary to standardize the hospitals in which interns were to get their posttheoretical training, but that the fact that medical schools would be able to discriminate between hospitals and send their graduates only to those that fulfilled the necessary requirements, would go a long way toward raising the standards in all the hospitals, since all hospitals needed interns and would want to meet conditions necessary to obtain them. Dr. Wilder thought the day was at hand when hospital superintendents must of necessity be men and women of medical training who could assume an attitude *en rapport* with the whole system of medical education.

LAYMAN URGES MEDICAL SUPERINTENDENTS

Mr. Daniel D. Test, of Philadelphia, always happy on his feet, said that from the Rooseveltian standpoint he was an "undesirable citizen" in that he was a hospital superintendent and not a medical man; he wished he were a medical man, not only because he would be a better superintendent if he had medical training, but because he could get a much larger salary for the thing he was doing today. He spoke heartily in favor of the organization of a school for the training of hospital superintendents; he believed in the idea, but he did not think that it ought to be understood that competent hospital superintendents could be made entirely by attending school. He referred to Dr. Martin's "twenty percent efficient young medical graduate," whom it had taken four years of intensive study to bring so short a way toward efficiency, and he did not think that very many men or women who had finished medical school could be induced to take another four years of hospital training. But he thought the school would do a lot of good and give the finishing touches, or at least vastly improve the qualifications of men and women who had already had some actual experience.

WHEN A DOCTOR'S PATIENT DIES

Dr. Philander A. Harris, Paterson, N. J., thought that the medical man, and more especially the surgeon, should have a larger voice in the settlement of the administrative problems in the hospitals in which their patients were being cared for. For instance, a doctor has operated on a patient and has done what he considers a good job and one that promises a good result; and all of a sudden, and without any apparent cause the patient dies—because of something over which the operator had no control, as, for instance, the asepsis or the nursing, or some feature of the after-care. He thought that control over that patient, on the part of the surgeon, should have extended and reached out to the nurses, to the assistant physicians, and to all the clinical assistants. He thought any scheme of standardization would be inadequate that did not fully cover this point, and he pointed to the manual of the United States Post-office department, in which a rule of action was appointed for every detail of every incident that could happen in every bureau and every department.

STANDARDIZE DOCTORS FIRST

Dr. H. G. Wetherill, of Denver, thought that the American College had taken up this matter of standardization in the proper sequence since it had begun consideration of better hospital standards by attempting to establish some standards for the surgeons themselves. He thought it would be practically impossible to standardize the hospitals until some veto power could be exercised over the medical profession to keep out incompetents and to limit certain men to work that they were actually capable of doing. He was quite sure that a beginning had been made in this direction by the College in its attempts during the past two or three years to fix the qualifications of an approved surgeon. He thought there was entirely too much freedom nowadays in most states in permitting almost any man who was a graduate in medicine to do anything in any hospital that he pleased to do, whether he was actually capable of doing it or not.

BEVAN'S STORY OF STANDARDIZATION

Dr. Arthur Dean Bevan, of Chicago, who did so much to bring about the standardization of medical schools, spoke of recent attempts on the part of the Council of Medical Education of the American Medical Association, during the time he was chairman of that council, to bring about the standardization of hospitals. Dr. Bevan spoke of the appointment of state committees by the council to study and report on progress in standardization in their several states. He said that some very good work had been done by the members of the council, and some very excellent reports had been made from year to year, but that after these reports were made practically nothing was done again for the next three or four days, and until another very excellent report was submitted. Dr. Bevan thought the most important thing in medicine in this country today was this one of the standardization of hospitals, and he advised the creation of a permanent organization to handle the matter—a recommendation, by the way, which was acted upon at the close of the meeting by the creation of a general committee of twenty-five. He thought there should be a permanent salaried secretary engaged to handle this work, since it was his experience that some one individual must be definitely charged with the responsibility for what was done. It was fortunate, he believed, that the American College of Surgeons had a considerable fund which could be devoted to the study and solution of this problem. Dr. Bevan thought the next thing to do was to bring together all factors interested in the problem of hospital standardization, not only the American College of Surgeons, but the Association of the American Medical College, the state licensing boards, the American Medical Association, and the various hospital associations. Standardization, he thought, was not a surgical problem, but it was a problem of vital interest to all men engaged in all branches of the practice of medicine, and the whole profession ought to have those interested engaged in the work.

THE ADMINISTRATIVE CONSCIENCE

Dr. Edward Evans, of La Crosse, Wis., thought it vital to include in the factors looking toward standardization the ideal of an administrative conscience and, to illustrate, told the story of a medical man in an operating theater of a hospital, who, while waiting for his patient to have a

Cesarean section operation, indulged for so long a time in an amusing story leading up to the operation of the day that the intern had come in and had reminded the operator that unless he hurried up, the woman would be delivered normally. He did not blame the surgeon quite so much that a thing like that could happen as he did the hospital. He thought that if there had been an administrative conscience in that institution such an incident could never have occurred. Dr. Evans thought it was little short of criminal that in some hospitals any member of the medical profession in the community could do just about what he pleased and as he pleased.

The Afternoon Session

It was decided best to have the three papers of the session read first, that of Dr. John Young Brown, of St. Louis, on "Organization and Efficiency"; that of Dr. Francis Carter Wood, of New York, on "The Laboratory"; and that of Dr. E. A. Codman, of Boston, on "Case Records and Their Value."

Two of these papers appear elsewhere in this issue.

THE EFFICIENCY ENGINEER IN THE HOSPITAL

Dr. Robert L. Dickinson, of New York, spoke on his favorite topic of reducing hospital administration and even surgical practice to terms of efficiency engineering. He spoke of the Taylor Association and its work in undertaking to standardize institution efficiency. Later on, when someone taxed Dr. Dickinson with the impossibility of standardizing, for instance, a surgical operation, and reducing it to a matter of mathematical motions, he insisted there were certain details in surgery that could be properly standardized. He thought, for instance, that Crile's tying of a stitch could be standardized and shown in motion pictures and reduced to so many motions. Dr. Dickinson spoke of the necessity of having a clerk who duty it would be to keep accounts of standardized details in hospital efficiency. One principal feature of Dr. Dickinson's discussion was insistence on the reduction of the number of services in the hospitals of the country. He thought, for instance, that under medicine as a main service should be neurology, dermatology, and any other medical specialties, and that under surgery all surgery should be listed, and that the surgical staff should be responsible for all the surgery.

Dr. J. Garland Sherrill, Louisville, Ky., suggested the appointment of a committee, with Dr. Codman, at its head, to formulate a standard case record, and asked that the meeting take some action on it.

HOSPITAL BOARDS SHOULD BE EDUCATED

Dr. Edward N. Brush, of the Sheppard and Enoch Pratt Hospital, Towson, Md., gave a concrete instance, out of his own experience, in which the troubles of a hospital were due to inexperience and want of information on the part of the board of trustees. He thought that the fixing of standards would be very much easier if a propaganda to educate hospital boards was instituted. Most of these trustees, he said, were business men; it is the habit of business men to think in terms of dollars and cents, and they would have to be educated out of that attitude if they were to deal properly with hospital problems.

Dr. Brush also had a word to say about hospital superintendents: he believed it was quite impossible to train hospital superintendents in any school, as proposed in Dr. Ochsner's resolution early in the day; he thought that a far better way would be to engage the interest of the administrators of a large number of the larger and better hospitals and get them to take into their institutions a certain number of promising young men and give them the actual experience of hospital work itself, and as a regular business.

Dr. Frederick W. Zimmer, Rochester, N. Y., told what Mr. George Eastman had done for Rochester through the agency of the Rochester Municipal Research Bureau. A complete survey of the hospitals of the city had been made and a voluminous and splendid report submitted, at the end of which many hospitals improved conditions in many of their details of administration. Mr. Eastman himself had paid for vast improvements in at least three of those hospitals. Dr. Zimmer thought the report would be of great interest and help used in connection with the proposed standardization throughout the country.

Dr. Cleveland H. Shutt, hospital commissioner of St. Louis, thought that all of the activities of the American College of Surgeons, in regard to proposed standardization should center on boards of trustees. He thought that, if each hospital board could have an outside and disinterested statement as to its weak and strong points, the boards would quite often see to it that improvements were made.

MORE PAPERS READ

The discussion of the three papers above mentioned having ended, Dr. Allen B. Kanavel, of Chicago, read a paper entitled "The Educational Responsibility of the Hospital to the Profession and to the Community," and Miss Annie W. Goodrich, associate professor in Teachers College, Columbia University, read a paper on "The Trained Nurse." These papers are also published in this issue. At the end of the papers, Dr. A. J. Ochsner, of Chicago, opened the discussion. He said that these meetings were the culmination of a very long-standing dream of Dr. Bowman, director of the American College of Surgeons; he thought that with the enthusiasm and aggressiveness that Dr. Bowman himself would put into the work, it was impossible not to accomplish very much. He was quite sure that most hospital boards and administrators were waiting in expectation that some such upheaval was bound to occur eventually similar to that which had occurred in the standardization of medical schools, and he was also quite sure that when hospital boards were advised as to what they should do and where improvements could be made, they would be found ready to respond.

Dr. Ochsner thought it was highly necessary to find the "right man" to act as executive secretary in this work of standardization. He spoke of Bevan's work in the standardization of the medical schools, and he thought that a like masterly hand was going to be required to get any similar work done in the hospitals. Dr. Ochsner thought that if the immense amount of waste that was constantly going on in all the hospitals of the country could be measurably cut down, much money would be available to do the necessary things to improve standards.

Dr. Ochsner thought there were three points that ought to be emphasized in approaching the problem of standardization: (1) publicity; (2) staff members should be made to take a personal interest in the history-writing in their institutions, because in the preparation of good histories it would be found that many things were necessary to do for patients, and that not only would the histories themselves be better written, but the service to patients would be better in order to make the histories of greater value; (3) attention should be directed on the nursing service; an immense amount of education was required, mostly directed at the medical profession itself, if better nursing

was to be given, and with better nursing the whole atmosphere of many hospitals would be improved.

CALIFORNIA EIGHT-HOUR LAW

Dr. Henry S. Sherk, of Pasadena, spoke of the operations of the California eight-hour nursing law. He thought that the law had effected good in many directions and that there were some disadvantages; those interested, he said, were now engaged in the preparation of some amendments to the law which ought to greatly improve its efficacy. There was no doubt in his mind that the necessity for the law was the flagrant abuses of pupil nurses in the hospitals of the state; he mentioned instances in which pupil nurses were compelled to work for eighteen or twenty hours, and in which all the forces, including pupil nursing service, were commercialized for the financial benefit of the institution. He thought it was a mistake that the eight-hour law did not provide for the employment of pupil nurses as "specials"; very much of value in their education was lost because of this fact.

Dr. George K. Sexsmith, of Bayonne, N. J., thought that a very great mistake was being made in many hospitals of the country by prohibiting the inclusion of medical men in the boards of trustees; this exclusion of doctors on the board had resulted in the suppression of much information to which hospital trustees had a right. He thought that boards of trustees ought to know, for instance, the number of people who were dying in their institutions, and that the reasons for the deaths ought to be interpreted to the lay members of the board by competent medical members.

Dr. F. Gregory Connell, Oshkosh, Wis., spoke of the utilization of clinical material for teaching purposes in the small hospitals of the country. He gave instances in the state of Wisconsin in which teachers from the state university medical school had given demonstrations and lectures. These faculty members would go to the smaller hospitals in the state and give clinical talks, using material in the hospital; the experiment had been eminently successful, and he thought more of that work ought to be done because, not only would the visits of these men from the teaching centers give much of value to the local staff members, but such a visitor was there to bring with him many new ideas in hospital administration that would be of great value to the hospitals themselves.

Dr. R. W. Corwin, of Pueblo, Colo., said he would like to ask Miss Goodrich whether she thought it possible that pupil nurses might take their theoretical training, leading up to the practical part of their hospital work, before they came into the institution itself; he thought that if that were possible very much chaos in hospital routine would be eliminated.

In reply, Miss Goodrich said she thought that such studies as chemistry, anatomy, physiology, and household economics should be taught in the high schools before the pupil went into the hospital, and that very many things ought to be taught the girls in their own homes; if that were done the pupils would be very much better able to apply their knowledge in their hospital work, as, for instance, she thought that dietetics should not be taught as a detached three months' course in the hospital, but that it should run throughout the pupil's training, having relation all the time to the employment of special feeding in the treatment and cure of hospital patients.

Friday Night's Meeting

The meeting of this evening was given over to the reading of papers by Mr. Asa Bacon, superintendent of the Presbyterian Hospital, Chicago, on the general subject of hospital efficiency, including a questionnaire proposed to be employed by personal investigators for the American College of Surgeons in the hospitals; a paper by Rev. Father C. B. Moulinier, president of the Catholic Hospital Association, on behalf of that organization and its activities; and a paper by Dr. E. P. Lyon, dean of the University of Minnesota Medical School, on behalf of the medical schools.

Mr. Bacon's paper was so well received by those in attendance on the meeting that it was decided not to submit it for publication until it had been reviewed and studied by the committee of twenty-five. The intention was then that the paper should be used as a basis for a questionnaire to be sent to the hospitals and to be later on used in the inspection of the individual institutions. The evening discussions and the papers of those who followed Mr. Bacon are so intimately connected that it would seem rather inexpedient to outline in detail the talks of the evening until the papers themselves are available for publication. Mr. Bacon's paper and the discussion of that evening are to be published in the January number of THE MODERN HOSPITAL. Suffice it to say just here that Mr. Bacon's paper went into the intimate details of management by way of questions calculated to bring out exactly what the institutions are doing and how they are doing it.

Saturday's Meeting

At the opening morning session, Dr. John G. Bowman, presiding, named the following committee in response to the resolution of the previous day, to consider a program for the proper training of hospital superintendents: The Surgeon-Generals of the Army, Navy, and Public Health Service or their representatives, Dr. Edward Martin, Philadelphia; Dr. Burlingham, St. Louis; Dr. S. S. Goldwater, New York; Dr. John A. Hornsby, Chicago; Father C. B. Moulinier, Milwaukee; and Dr. Allen B. Kanavel, of Chicago. This committee was instructed to meet and if possible to prepare a report for submission to the American College of Surgeons during the meeting the following week.

The chairman of the meeting spoke at considerable length on the subject of the practical approaches to the problem of standardization, as he saw it. He was for getting busy at once out in the states; he proposed that a state meeting be called by each state committee and that program for the state be outlined at the big get-together meeting. He wanted vim and fire and enthusiasm behind these state meetings; he wanted the right people invited. When the meetings were called, he wanted the whole problem of standardization brought out in the simplest form and discussed from the standpoint of the public health of the state as well as in the interests of the various groups responsible for the conduct of the hospitals.

Dr. Bowman thought that personal inspection of the hospitals in different parts of the country should begin at once and under the general auspices of these state committees. He thought the surveys could be made at first quite rapidly and that an immense amount of data could be collected in that way, and that in the course of the inspection the inspectors could plant seed that would keep the hospitals busy for several months improving things, so that by the next time the inspector came around, say in six or eight months, a good deal of the work of standardization would have been installed. He wanted it understood that this whole problem of standardization was based on a spirit of helpfulness and was not in any instance intended to hurt any hospital or any person or group of people. He thought that past obstacles to the establishment of standards had been largely the result of want of

proper information and proper data, and that when the hospitals themselves had the information that they needed and the standardizing body had the data it needed, the way would have been cleared for a rapprochement of all the groups in all the hospitals. He thought that one of the best effects of personal inspection of the hospitals would be on the public itself—that the public would be educated as to conditions in their hospitals and the means to better these conditions, and he thought that with the education of the public many means would come by which any expenses incident to improvement of conditions would be met.

Dr. Bowman outlined the work in detail, as he saw it, for the training of the hospital inspector who went into a hospital, including the tabulation of data, his talks with the superintendent and with the trustees and his conduct of the inspection itself.

Dr. Bowman urged publicity as one of the predominating influences on the whole problem of standardization. He thought it was fundamentally necessary that the meaning of the whole thing be stated specifically and from every angle to the public, and by the public he meant also state and county medical societies. He thought the public ought to be informed as to what standardization really meant and necessity for it; that newspapers and lay magazines of every sort should be interested; and that they should be asked to take up the question and help along with it.

Dr. E. S. Van Duyn wanted to know just exactly and more specifically what standardization was expected to cover. He had understood at one time that it was to cover the medical work and instruction in the hospital, but from Mr. Bacon's paper of the night before he gathered the impression that it was perhaps to go into economies in coal consumption and the engineering problem of the hospital, and he wanted some authoritative statement as to just what was proposed.

The chairman advised him that the one thing first of all is the care of the patient, and he thought that perhaps it might be necessary to confine the investigation to the problems in which the patient was directly concerned, but after all, if a hospital was to be efficient—and efficiency costs money—it was also necessary that every economy should be practiced in order that there might be funds available to pay for necessary improvements, and in that way he thought that eventually it would be absolutely necessary to take up engineering problems and economies and other technical administrative features.

There was a long discussion of hospital economies and whether or not these economies should be gone into in any proposed inspection for purposes of standardization, Dr. George W. Crile, of Cleveland; Dr. L. W. Littig, of Davenport, Ia.; Dr. Edward Martin, of Philadelphia; Dr. E. A. Codman, of Boston; Dr. Edward Evans, of LaCrosse, Wis.; Dr. Charles E. Bowers, of Wichita, Kan.; Dr. George B. Kunkel, of Harrisburg, Pa.; and many others taking part.

On Saturday night, at the close of the meeting, there was a splendid banquet at the Congress Hotel at which nearly three hundred visitors to the standardization congress were present. There were addresses by Dr. Crile, who acted as toastmaster; Dr. Homer Gage, Dr. A. J. Ochsner, Dr. W. D. Haggard, Dr. Edward Martin, Rev. Father Moulinier, and Dr. John G. Bowman.

A letter was read from Dr. Franklin H. Martin, who was prevented from being present by illness. The letter told something of the work of the American College of Surgeons, of its aspirations, of its ideals, and also told why the college was interested and deeply concerned about the standardization of hospital service. Great regret was expressed at Dr. Martin's illness. It is a pleasure to be able to say that Dr. Martin had recovered sufficiently to attend one or two of the meetings of the Clinical Congress of Surgeons on the week following the close of the hospital meetings.

GENERAL COMMITTEE ON STANDARDIZATION

Director Bowman, of American College of Surgeons, Asks Aid of Surgeons and Hospital Workers

At the close of the hospital standardization session of the American College of Surgeons, recently held in Chicago, Director Bowman appointed a general committee, whose duties it shall be to advise in regard to the proposed standardization of the hospitals, as per the program of the Chicago meetings.

Director Bowman intends to call this committee together early in December at Washington, D. C. One of the purposes of that meeting will be to discuss and finally pass upon a questionnaire to be sent to all the hospitals, and to approve a plan of personal inspection that is to be submitted.

It will be noted that the committee takes in a number of groups—surgeons, internists, and hospital people, including the presidents of the American Hospital Association, and the Catholic Hospital Association. The names of the members of the committee follow:

GENERAL HOSPITAL COMMITTEE OF THE AMERICAN COLLEGE OF SURGEONS

The president of the College.
The general secretary of the College.
The director of the College.

Surgeons:

Dr. Charles H. Mayo, Rochester, Minn.
Dr. Allen B. Kanavel, Chicago.
Dr. A. J. Ochsner, Chicago.
Dr. W. W. Pearson, Des Moines, Iowa.
Dr. Fred Bates Lund, Boston, Mass.
Dr. J. Bentley Squier, New York City.
Dr. John M. Baldy, Philadelphia.
Dr. Robert S. Cathcart, Charleston, S. C.
Dr. Edward Jackson, Denver, Colo.

Internists and Laboratory Men:

Dr. Victor C. Vaughan, Ann Arbor, Mich.
Dr. E. P. Lyon, Minneapolis, Minn.
Dr. L. B. Wilson, Rochester, Minn.
Dr. Francis C. Wood, New York City.
Dr. William H. Welch, Baltimore, Md.

Hospital Superintendents and Others:

Mr. Asa S. Bacon, Presbyterian Hospital, Chicago.
Dr. John A. Hornsby, Editor of THE MODERN HOSPITAL, Chicago.
Dr. S. S. Goldwater, Mount Sinai, New York City.
Dr. Winford H. Smith, Johns Hopkins Hospital, Baltimore.
Father C. B. Moulinier, S. J., president of the Catholic Hospital Association, Milwaukee, Wis.
Dr. A. B. Ancker, president of the American Hospital Association, St. Paul, Minn.

Representative to be nominated by the Surgeon-General of the Army.
Representative to be nominated by the Surgeon-General of the Navy.
Representative to be nominated by the Surgeon-General of the United States Public Health Service.

The Value of Case Records in Hospitals*

BY E. A. CODMAN, M. D., Boston.

The science of medicine is in an experimental stage. Every time treatment, whether operative, mechanical, or medicinal, is given, an experiment is performed. It is no less an experiment because it is made on the human subject. In every experimental science, records are made of each trial, giving all necessary details, and especially noting the result. Singularly enough, in these human experiments which we constantly perform in our hospitals, it is not usual to make special effort to see that the results are

*Read at the Hospital Standardization Session of the American College of Surgeons, Chicago, October 19-20, 1917.

systematically recorded, even though the details of the operations or treatments may be written down in the clinical records. If we were using dogs in the numbers that we are human beings, there would be a great cry raised against our brutality for causing needless suffering. We should defend ourselves on the ground that these experiments were necessary to science, that they were carefully conducted and recorded, and that the victims' sufferings were minimized in every possible way. Curiously enough, the public does not ask us to be so particular about our fellow beings, and, as a matter of fact, we could not well defend ourselves on the ground that our clinical experiments are scientifically recorded and the results always noted and studied.

Old-fashioned physicians and surgeons will tell you that the science of medicine is still too imperfect to permit us to trust the public with the truth about the results or the complications incident to treatment. There has been a habit in the medical profession which even now is so justified by custom and usage that it is next to a moral law. This habit I will call "poetic license." No matter what they have preached in their lectures or written about scientific accuracy, all professors of medicine and surgery have by example taught students that, in actual practice, it may be right to conceal from the patient the truth about the case. In a way the public has forced this habit upon us. How often the husband and wife come to us separately, and each tell us to conceal from the other the fact that cancer is present in the one or the other! The victim tells us that the husband or the wife cannot bear to know the fact, and the husband or wife begs us to conceal the truth from the victim. I could carry illustrations of this habit of "poetic license" much further, but it is sufficient for us all, layman as well as doctors, to confess its existence. Clinical teachers make free use of it, and their students go into practice—and make free use of it. The question is, has the time come when we can face the facts in a truly scientific manner? Can we let others look at the results of our experiments? "The wise, old-fashioned physician" will tell you that it is not yet time, but the modern surgeon who can demonstrate success in perhaps 95 percent of his experiments is becoming ready to let the public be acquainted with the facts. Unfortunately, even now, the modern physician is not very keen for direct truth on the clinical side, although to the laboratory side he gives more scientific energy than does the surgeon.

If, however, we put considerations of human nature aside, we can take it for granted that in an experimental science it is important to make record of our experiments and especially of their results. The truth should be recorded even if expediency keeps the records under lock and key.

Case records are made for three purposes. The first we can call scientific; that is, to record the facts observed about the case, so that these facts may be in available form for so-called scientific studies, which the attending physician or surgeon or some other (qualified) person may make. Second, for practical purposes. For instance, if a patient has been in the hospital and returns for further treatment, we want to be able to find out what his condition was when he was in the hospital before, and what were the details of his treatment. The third use of records is for medicolegal purposes. The law requires some form of record, especially in cases of accident or crime.

It needs no argument to show that records should be made for these three purposes. In most hospitals there are some such records, however inaccurate and inadequate they may be. I wish to suggest a fourth use for case records—as data to form a basis for study to increase the efficiency of the hospital.

It is a singular fact that this idea is a relatively new one. Heretofore trustees have been content to know that their patients have been *treated* and *cared for*. They have not concerned themselves with the efficacy of the treatment given. Each member of the staff has done the best for his patient that his time and conscience has allowed him to do, but each member of the staff, being in a glass house, has not cared to inquire into the efficiency of other members of the staff. As for the superintendents of hospitals, they have had more than enough to do to look out for their share of the work, without getting into hot water by inquiring into the results obtained by the physicians and surgeons. In fact, we must confess that it has been the duty of no person or department in most hospitals to inquire into the efficacy of treatment. The vague reputations which members of the staff earn in the hospital and in the community has been the only criterion. And in the making of these reputations personality dominates efficiency.

My own interest in hospital records is largely from this point of view of using them to increase efficiency. I advocate the end-result system of hospital organization which was recommended by a committee of the Clinical Congress of Surgeons[1]. This system is perfectly simple, the only difficulty with it being its revolutionary simplicity. It requires straightforward, truthful answers to these questions:

What was the matter with the patient?

What did the doctor do to him?

What was the result?

If the result was not good, what was the reason?

Was it the fault of the doctor, the patient, the disease, or the hospital organization or equipment?

Heretofore in hospital organization there never has been a bona fide attempt systematically to fix the responsibility for the success or failure of each case treated. I claim that our record system should enable us thus to fix responsibility, and that it should be *used* for this purpose. I claim that medicine is already enough of a science to enable us to use the great principle of comparison as in other sciences. Records we must have, clear, honest records, no matter how brief, if they fearlessly face the facts. If we do this, our records will be of more scientific value than at present. They will also cover the practical uses and the medicolegal ones. So far as the medicolegal uses go, this new type of records will perhaps be of more value in the execution of justice in general than to each hospital in particular. At present the community allows hospitals to evade medicolegal complications, but the time is coming when the hospital must take more responsibility and be able to show it is at least recording and analyzing the results of its experiments. The absence of a system to fix the responsibility for each experiment should be more culpable in the sight of the law than the failure of the experimenter to perform a carefully conducted experiment successfully.

In hospital organization, we may profit by the teachings of the modern science of efficiency engineering. The sixth of the twelve principles of efficiency demands the existence of reliable, immediate, adequate, and permanent records. "Reliable" includes the ideas of being accurate, honest, authoritative and complete. "Immediate" means available to those interested; practically indexed by name, disease and anatomic region; clear; brief or abstracted; easy to handle

[1]Surgery, Gynecology, and Obstetrics, June, 1914.

and to study. "Adequate" means being purposeful; for instance, quite different in a hospital connected with a university from those in a hospital in a mining camp, but accurate and fearless in both. "Permanent" means too valuable to lose; it also refers to the materials used in the making and to the importance of keeping the completed volumes under lock and key (recognizing human carelessness). Nevertheless, being permanent does not refer to perpetuating old faults. Harrington Emerson, in his chapter on records, says that it has not been unusual to find in the records of a corporation "a great variety of monthly tabulations, and when inquiry is made it is finally unraveled that twenty years before some president wanted a certain set of records, and his successor wanted a different set, which were started in parallel; that a third and fourth incumbent added their requests, but the old tabulations continue to be made and painstaking clerks work their monotonous lives away in neat compilation that no one has looked at, much less used, for a decade."

In the special subject of hospital records, the efficiency experts would need one more important adjective, and this is "educational." Perhaps they include it under "permanent." The young doctor must necessarily get his training in a hospital, and one important element in his training is in writing records. I have no fault to find with our attempt to make this combination of scientific records and opportunity to learn by experience, except to say that, today, in most hospitals I fear that the records are left *entirely* to the students and are not even signed by those actually responsible for the treatment and its results. In my opinion the member of the staff responsible for the treatment should at least O. K. the record before it is filed. A staff that is too busy to do this needs more help, and should not be allowed to corner the material of that hospital. The permanency of hospital records, if signed, would be an incentive for accuracy and efficiency for all concerned.

The committee of the Clinical Congress of Surgeons which devised the end-result system believed that it is possible to recommend a system of records which will be *the greatest common divisor* of all hospital records—a system so simple that every hospital, large or small, could use it. The larger the hospital, the greater its endowment or other facilities, the more elaborate the records might be, but, no matter how detailed, they would still be capable of being abstracted into the form of this greatest common divisor. Thus, a record in a small hospital might be directly compared with the *abstract* of a record in a great hospital. We felt that the important facts under the eight headings which follow *should be known about each case in all hospitals.* Brief statements of these facts would be the minimum amount that any record should contain. The more elaboration there might be in the details of such records, the more should the hospital be congratulated, but every hospital should have for each patient a uniform card comparable with that of every other hospital and containing besides name, address, etc., brief statements under the following headings:

1. A *permanent* address of some relative or friend who would forward mail a year or more later.

2. The symptoms or conditions for which relief was sought.

3. The diagnosis accepted as a basis for treatment by the person responsible for or giving the treatment.

4. The name of the person who took the responsibility of treating the patient or the names of those to whom he delegated important steps in the treatment.

5. The important points in the method of treatment, whether operative or otherwise.

6. The complications which resulted from, during, or after treatment.

7. The final diagnosis at discharge, authoritatively O. K.'d for index filing.

8. The result, when time has elapsed for this to be determined, or a brief annual statement of the patient's condition.

Our committee devised cards to be used for this purpose, and an index chart to which the numbers from the cards could be transferred in such a manner that the chart would be an immediate index to all diagnoses. The use of these cards for the analysis of errors and waste, in order to prevent similar errors and waste in the future; and also to ascertain the persons and methods to whom success in treatment is to be attributed, constitutes the end-result system of hospital organization. It inevitably will lead to publicity, and as is usual in publicity given to other important matters of vital interest to the people, it brings up the questions of special privileges, vested interests, economic advantages, trade routes, educational concessions, and the almighty dollar. Anyone who is interested in my personal views on these aspects of the end-result system will do me a favor by reading the report of my own hospital, a copy of which will shortly be sent to every member of the American College of Surgeons who cares for one. Besides my personal views on some of these subjects this report will contain a practical illustration of the use of the system.

Hospital Organization and Efficiency*

BY JOHN YOUNG BROWN, M. D., F. A. C. S., Chief Surgeon, St. John's Hospital, St. Louis, Mo.

The title of this paper affords a very wide field for discussion. I shall limit my remarks, however, to a brief consideration of some of the recognized and fundamental defects incident to hospital administration as found in some of the hospitals in nearly all communities served by members of the American College of Surgeons.

One of the chief aims of this college is the elevation and maintenance of surgical standards. We hope to see the day when no man will be able to hold himself out as a surgeon in any community without possessing the necessary ability, education, and training which are required to produce a surgeon and which he would and should require of anyone about to operate upon himself or a member of his family.

To a certain extent, we strive to strengthen and purify our profession for reasons of pride and conscience; in addition to this, we all realize the fact that we are, together with those responsible for the conduct of hospitals, in the only true position to guide laymen in the selection of competent surgeons. We fully appreciate how helpless the majority of laymen are, even among the more intelligent classes, when it comes to the selection of one to render surgical service for them or their families in their hour of distress. The surgeon quite frequently sees examples of the lack of ability on the part of laymen to place a fair value on surgical competence. Hospital administrators are daily in touch with those who operate and are in position and should be able to gauge surgical values among the various operators coming to their institutions.

Hospitals are established for the purpose of rendering better service to the sick than they can obtain in their

*Read at the Hospital Standardization Session of the American College of Surgeons, Chicago, October 19-20, 1917.

homes. The most successful hospital is the one which is conducted primarily from the ideal standpoint of the best professional service to its patients, and not from the business standpoint of hospital economics and financial deficit or surplus.

It is impossible for those in charge of hospitals to evade the responsibility conferred through the trusting confidence of the patient who enters their portals in the full belief that nothing improper or unwarranted will be permitted by the hospital authorities during his or her stay within its walls. Were it not for this almost universal feeling on the part of the patient, it is doubtful if our hospitals could exist. Do the hospitals in return meet the confidence of the patient with a full realization of their responsibility in every direction? Unfortunately, in most cases, we must reply in the negative.

Many hospital superintendents realize the necessity of being able to fully control the standard of treatment which patients in their institutions should receive. Only a few superintendents, out of the great number in our country, are today endowed with sufficient authority in this matter. Unfortunately, there are too few superintendents capable of exercising intelligent and judicious supervision in medical matters.

Primarily, the welfare of the patient in a hospital is in the hands of the board of directors or trustees. Their responsibility to the patient can be fulfilled only when they have provided a competent staff and conscientious superintendent, and have given them full authority to maintain the standards of all departments—surgical, medical, laboratory, nursing, commissary, etc.—on such a basis as they would desire, were they also to become patients.

At the present time the legal restrictions in the various states unfortunately are not sufficient to guarantee the proper standards of surgical excellence. The hospitals, however, are in position to refuse to become a party to other than competent and skillful work in the handling of the unfortunate sick in their charge.

A position on the board of trustees or directors of a hospital is a great public trust; that trust must be observed and realized to a greater extent, and it is our duty in every rightful manner to assist hospital boards and administrators to a full understanding of their responsibilities to the public. They cannot relieve their conscience with the inference that the treatment of the patient lies with the doctor's conscience and that they are to supply only the facilities for carrying out his work. Many board members must be enlightened upon this particular phase of their responsibilities. There can be no doubt that many board members would shrink from the knowledge of conditions within their hospitals, were they informed of the true state of affairs.

We know of several large hospitals where apparently successful administrators are in charge, but whose success can be judged, unfortunately, only from the economic standpoint. The purpose for which the hospital exists is not being met. Incompetent surgeons and physicians daily work within their walls, with the full knowledge of those in charge. Unnecessary and unskillful operations are performed, and many patients suffer unnecessarily and lose their lives in these "successfully" conducted hospitals. We know that this state of affairs exists widely and in hospitals of all religious denominations.

It is said that competent hospital administrators are in wide demand. Is this really true? Are boards of trustees fully aware of the conditions within their hospitals, and are they seeking men who will conduct their hospitals not only successfully from the standpoint of the hospital treasury, but also for the welfare of the patient? I know of men fully competent who would accept such positions. I know of others filling such positions who, from our standards, are totally incompetent, yet whom boards of trustees would be reluctant to displace on account of their recognized ability to show, at the end of each fiscal year, a substantial balance in favor of the institution.

We of the American College of Surgeons should be satisfied only when our hospitals are conducted with the sole idea of what is best for the patient. Hospitals will furnish facilities satisfactory to us when this is met and when they will refuse to permit incompetent physicians to operate and treat patients within their walls. The plea is frequently made that the patient must be cared for and that the physician is the selection of the patient. This position is absolutely untenable, hence it is the duty of the hospital authorities not to shirk the responsibility of freely establishing the important fact that the physician in charge must be qualified for his work, and it is also their duty to decline to receive a patient when conditions as here outlined do not obtain.

Since the laity, by the very nature of things, expects these obligations to be discharged by the hospitals, why should not a properly conducted hospital, fulfilling its every obligation to the patient, make known to the community, through proper channels, its position in these matters and be rewarded by the increasing gratitude and confidence of its patients? Let me emphasize here that any hospital which is unable to advertise these facts to its patrons should either remedy the situation or discontinue its work. And since it is indisputable that there are few hospitals properly conducted which can finish the year with a surplus, it must be admitted that a financial deficit is more commendable than is a deficit of obligation rendered to its patrons.

The minimum of responsibility which the hospital may rightly assume is that which its board of trustees would wish any hospital to assume towards them as patients. Too frequently boards of directors carry their responsibility to the patient in a dual manner; they employ a superintendent to conduct everything but the medical department. The medical staff is but one department of his institution, and the competent superintendent or satisfactory administrator should know better than anyone else whether the patients in his institution are getting proper treatment.

It is our duty to inform boards of directors of the true conditions, to assist them in remedying these conditions, and to insist that they be remedied. If some directors can be shown wherein they are failing tremendously in the prime object of their institutions, I believe that the treatment of patients throughout the land will be materially improved. If, after every facility has been afforded those in charge of such institutions to see the true state of affairs, the hospital still fails to discharge its obligations to its patients and establish proper efficiency and organization, it may be necessary forcibly to impress upon administrators and trustees their vital responsibilities.

Dr. L. C. Carey, recently appointed superintendent of the new Alameda County Tuberculosis Hospital at Livermore, Cal., has been made acting medical superintendent of the Alameda County Infirmary, at San Leandro, succeeding Dr. C. A. Wills, who resigned to accept a commission in the army medical corps. Dr. Carey will direct both institutions until another superintendent for the infirmary is named.

The Educational Responsibility of the Hospital to the Profession and the Community*

BY ALLEN B. KANAVEL, M. D., Chicago.

The hospitals of this country owe their existence to the generous endowment of the public at large and the support of the members of our profession, and the time has now come to ask whether the institutions so endowed and so supported measure up to the standards demanded of them.

Hospital history demonstrates that there has always been a tendency to progress from the custodial and remedial institution to the teaching center. The Mohammedans maintained excellent hospitals at Bagdad, Damascus, and other cities, first custodial, later remedial, but with the passing years they became teaching hospitals, reaching their highest development in the magnificent Al-Mansur at Cairo, well equipped with lecture rooms and other facilities for instruction. The European hospitals were custodial or remedial until 1745, when Van Swieten organized a clinic of twelve beds in the Bürgerspital in Vienna. Bedside instruction was first introduced into France by Desbois de Rochefort in 1741, although Guy's Hospital was established and teaching carried out in the wards in 1723.

In the New World, also, the hospitals followed the same educational line. The first hospital to be established was by Cortez in 1524 in Mexico. The Hotel Dieu was established in Canada in 1639; the first hospital in what is now the United States, on Manhattan Island in 1663. For many years these and other hospitals established were only remedial institutions; but soon the teaching hospital began to develop here also, finding full development during the nineteenth century in the magnificent hospitals founded largely in association with medical schools. With the onset of the twentieth century, however, the number of hospitals increased with amazing rapidity, located in every community, under new conditions, without the restraining influences of university life, yet, under the supervision of most competent physicians, an enormous potential power for medical advancement if properly directed.

This representative gathering from all parts of the United States has a right to ask if these institutions measure up to the highest ideals of hospital life and to formulate if possible plans for utilizing this great force in extending medical knowledge and securing for the public the most efficient service.

The educational functions of a hospital may be grouped in four divisions: first, as to interns; second, as to the staff; third, as to the profession at large; and, fourth, as to the community.

What should a hospital teach its interns? First, medical knowledge; second, ideals; third, thoroughness; fourth, imagination. It is the duty of the staff and hospital authorities to cultivate all of these. In an entirely praiseworthy desire to "get on" in his profession, the intern easily mistakes the form for the substance. He sees men with good bearing and poor training apparently successful in practice. He does not know that this is the logical result of our earlier poor system of medical training, and that our newer ideas and better training will inevitably relegate these men to an inferior place; that, while now they are apparently the recipients of the respect and confidence of the community, as the years carry them into the lane of cypresses, they will lose that respect and confidence which is the glory and happiness of old age. That there is too much carpentry in surgery and too great slothfulness in medicine no one will deny, but that our profession or the awakened laity will tolerate it in the next generation is open to serious doubt. These facts should be impressed upon the intern. He should know that, in any community in which he may locate, competence, a full knowledge of the scientific principles of medicine and surgery, and an ability to apply them now constitute a *sine qua non* to a successful practice. Therefore, the hospital should be so equipped and the staff of such a grade that the intern may leave prepared in every way. He should be taught methodic history-writing and its execution should be demanded of him. Careful examination, physical and laboratory, should be insisted upon in every case. He should be encouraged to make independent diagnoses.

The imagination of the intern should be developed by favoring research. Research in fundamental branches may be a function of the medical schools, but clinical research belongs properly to the hospitals, and that hospital which favors it will find its efforts returned a thousand fold in the more careful work done by its staff and interns, in the general reputation the hospital will have in the community and in the confidence that will be reposed in it by the profession, the tangible result of which will be seen in the number of patients who will seek its doors. Meanwhile, the intern has been sent out to practice his profession with a medical training that assures him a practice, with an ideal that does honor to his institution, and an imagination that will enrich his life and perchance add something to the sum of human knowledge.

In this material age, care should be exercised to choose a staff wisely. Hospital trustees should realize that the possession of a large practice is not necessarily the badge of efficiency in our profession and that, if they choose their staff on the basis of income to the hospital, they may soon awake to a realization that the standard has been so lowered that the institution has lost the confidence of the profession and the community. With the general diffusion of medical knowledge, the laity is rapidly learning to demand a thorough training of the physician. Therefore the hospitals should anticipate the future and recruit their staffs from the most scientific of the profession.

Every hospital staff should demand and every hospital furnish all known equipment for diagnosis and scientific work. Hospitals originally took the place of the home in that the sick could be cared for better in a material way. Now a hospital is a diagnosis center, and every board of trustees should be alive to this new phase of institutional life. This demands chemical and pathological laboratories, generally with trained attendants, facilities for filing case reports, x-ray equipment, etc. As a protection to themselves, hospital trustees should urge post-mortems for all patients dying in the hospital, and the staffs should have the scientific honesty to support the demand. There is no surer way to weed out incompetents than this. It protects the hospital, the competent physician, and the community. Point me a physician who requests post-mortems, and I will point to a safe, able practitioner. Point me a hospital officially favoring and urging post-mortems, and I will prove to you that it is among our best institutions.

The relation of the hospital to the profession at large presents several unsolved problems, and the following suggestions may not be considered as practical now, but let us remember that we are building for the future.

The medical school sends the student from its doors

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with a diploma asserting that he is qualified to practice medicine—a polite fiction that we have accepted while at the same time belying our acceptance by insisting that the student should serve an internship. Beyond this neither the state nor his alma mater has gone. Any further knowledge the practitioner may acquire can be secured only through his individual practice, or by travel and study. But many members of the profession cannot leave their practices and must secure their development from knowledge brought to them. The public has contributed millions for medical school or hospital that accepts it tacitly agrees to fulfill that obligation. Does that obligation cease when the student leaves its doors?

The state brings every year new agricultural knowledge to the farmer's yard by means of traveling lectures and exhibit cars. Is the production of food of more importance than the preservation of health? Yet the physician must continue his education himself at great sacrifice of time and money. Should not the medical schools or the state, in addition to assuring the student a good medical foundation, follow the intern not only into the hospital and supervise his training there, but also into his chosen field and provide him with thorough extension courses, and cannot this further training of the practitioner be done best through these various institutions that are springing up in every community? All hospitals would be better for some university supervision and would certainly develop a higher function if they acted as the teaching centers for their communities. This would raise the standard of the hospital, center professional life about it, and develop the profession as a whole. This would necessitate an inclusive hospital instead of an exclusive hospital. Staffs should be chosen from the entire body of the profession for their teaching ability and their scientific training. The members should be considered as university extension teachers without special privileges in the hospital except those always accruing to special training and competence. This teaching might be done under the auspices of a parent university or the state.

The public has always had unstinted praise for knowledge, and in proportion as our profession demonstrates a real scientific spirit, the moral and material support of the community may be expected. No propaganda will be needed then to educate the public as to the fallacy of faith cures, osteopathy, or chiropractics, for the rise of which we ourselves are primarily responsible, in that they are the heritage of our aloofness from the public and the mystery with which we have clothed our profession. Science needs no mystery, knowledge no mask, and competence no propaganda. The laity must be taught by lectures and demonstrations under proper auspices. The public is more ready to help us and understand our problems than we have been to take it into our confidence. To win this confidence the staffs and the trustees of the hospitals must have the right ideals in medicine. Efficiency of the one and service divorced from material advantage on the part of the other must be our ideals. Dividends must be sought in scientific knowledge, in the cure of disease and the amelioration of human suffering rather than in dollars and cents. But let no one doubt that the latter will follow inevitably in the train of the former. The trustees are anxious and willing to do their part, but they must be taught the difference between a custodial and remedial hospital and a scientific hospital. The trustees and superintendent must cease to feel that their duty ends when they have provided food and beds for patients. Carpentry in surgery must end. Laxness or laziness in diagnosis should be branded as a crime. The hospital must become a diagnostic and teaching center if it is to realize its highest ideals of servce to the physician, the patient and the community.

The Trained Nurse*

BY ANNIE W. GOODRICH, Teachers College, New York.

The general agitation and the increased demand upon days already overfilled caused by our present international crisis have made impossible the careful study and analysis of the subject upon which you have asked me to speak. It is therefore with "a plain tale from the hills" of a long practical experience that I come at your request before you today, but if the conclusions of the unlettered agree in the main with the conclusions of those students of the subject whose scholastic ability is established by well-recognized academic degrees, then are the arguments rather weighty ones and not perhaps to be lightly thrown aside even if the readjustments their acceptance necessitates entail some temporary inconvenience.

Since the request was made in 1911 by the National League of Nursing Education that the Carnegie Foundation undertake a study of schools of nursing in the United States, encouraging and even notable advances have been made in nursing education; a more definite recognition of the professional status of nursing has been accorded by educators, the medical profession, and the public at large, while the inclusion in health programs, whether federal, state or municipal, of nurses in ever-increasing numbers establishes without question the social value of this public servant. It is not necessary to present to such a body as this illustrations of these facts, but one or two may serve to bring sharply before us changes that have come about so gradually as hardly to be fully appreciated even by those directly connected with the field. In a report of the year's progress of the University of Cincinnati, Mr. Rufus B. Smith, Chairman of the Board of Directors, says:

"The most important permanent change in the course of instruction of the university has been the making of the School of Nursing and Health of the Cincinnati General Hospital, a department of the Medical School of the university. . . . This enlargement of the sphere of university education finds precedent and justification in the University of Minnesota, the University of Indiana, the Washington University of St. Louis and Columbia University in New York City."[1]

And an added and interesting evidence of the changing attitude toward nursing as a profession is presented in an editorial in Science referring to the step taken by the University of Cincinnati as follows:

"The University of Cincinnati has taken over the School of Nursing and Health of the Cincinnati General Hospital and has put it under the immediate direction of the Dean and Faculty of the College of Medicine. The university has already been given control of the laboratories of the hospital and through its medical faculty is doing all the medical, surgical, and research work at the hospital. Appreciating the service rendered to the people of Cincinnati by the medical faculty, the city authorities requested the university to undertake the direction of the School of Nursing and Health also. The university will thus be responsible for all the educational and scientific work of the entire hospital and its various branches. When the new medical college building is completed, as it is expected it will be early next year, the work of the Medical College, the Pathological Institute, the School of

*Read at the Hospital Standardization Session of the American College of Surgeons, Chicago, October 19-20, 1917.

[1]University of Cincinnati Record, July, 1917, p. 11.

Nursing and Health will be assembled in one place as they already are in one organization. Nursing will become a skilled and learned profession to a degree far beyond its present attainment. The advance of modern scientific methods of treating the ills of mankind has already forced the issue upon medical training. That inadequate preparation of nurses and exploitation of them by so-called training schools will be eliminated is an inevitable next step. A nurse should have a liberal and broad education, languages, history, and the social and physical sciences, and she, like the physician and dentist, should keep up with the developments in her own and allied professions. Carried out in this way, nursing becomes a dignified calling, demanding for success a comprehensive university training."[1]

These encouraging evidences of advancement unfortunately only emphasize the importance of an investigation or study of these schools, for it is not possible that such wide differences should be permitted longer to exist in the education of the members of a profession as are presented, on the one hand, by these schools of nursing that are integral parts of or closely associated with the universities, and, on the other, by the many hundreds of schools that are departments of hospitals the clinical material of which is represented by a bed capacity ranging from fourteen or less to several thousand; the faculty of which in only an occasional institution presents an adequate and qualified staff, being generally limited to two or three members who are also charged with the administration of the institution, a force inadequate for the protection of patients whose care is rendered by a student body; whose curriculums are as varied from the standpoint of subjects and the hours allotted to them as are the general educational qualifications of the students who are to be prepared for a professional life by this content of education, and furthermore is imposed upon by a nine, ten, or even twelve-hour working day. We do not believe that, outside of the state of California, there are a dozen schools in the whole United States that limit the working hours of their students to forty-eight a week, although it has been proved to be economically, socially, and physiologically unsound to impose longer hours than these, not upon students, but upon men and women in the occupational field. In the light of the hours of labor still required of the student nurse, it is interesting to find an Englishman, at a time when the terrible depletion of the laboring force of Great Britain would have seemed to make necessary a doubling of the hours of labor, arguing for a six-hour day as the logical consequence of "the new understanding that it does not pay to overwork people."[2] This overworking of students would not be so extraordinary if it did not occur under the jurisdiction of the institutions of the community whose one concern is health. The fact that seventy-seven hospitals are conducting schools in California with the working hours of the student nurse limited to forty-eight a week is conclusive evidence that these hours are possible.

NUMBER OF APPLICANTS

The recent efforts, because of the war situation, to interest young women in entering schools of nursing, have been successful beyond all expectations. Literally, hundreds have sought for admission to our leading schools within the past few months. The Presbyterian Hospital in New York in the two months following the announcement of a course in connection with Columbia University received 800 letters of inquiry, and, while it is possible that the connection of this school with the university and the credit to be given of an academic year for certain courses in the sciences to college graduates might in a measure explain the large number of applicants, it does not wholly do so, for a report from the Johns Hopkins Hospital shows 976 letters of inquiry in the past four months, not including many from college graduates, asking if any shortening of the period of training was to be made, and it is further reported that a large percentage of those asking for such credit later sought admission for the regular course of three years. The tragic fact—and tragic is not too strong an adjective to use today in this connection—is that, despite the many schools whose need of pupils is such that they are accepting applicants whose general education falls to or below the eighth grade, these would-be students with high educational qualifications are lost to the profession, because, even if referred to these schools, they are intelligently unwilling to accept the conditions they find there and the kind of education offered.

We are therefore deeply grateful to learn that it is the intention of the American College of Surgeons to include in their program a study of these schools, believing that such study cannot fail to hasten this greatly needed standardization of nursing education.[1] A very superficial analysis of the data presented in the "Survey of Schools of Nursing" issued by the California State Board of Health,[2] cannot fail to remove all doubt, if there be such, of the great need of this investigation. So closely does the information contained therein coincide with that furnished by the reports of the past nine years of the educational department of the schools of nursing in New York State that we are of the opinion that the conditions in the schools in any state would not materially differ except in one respect, namely, the universal provision in California of the forty-eight-hour week already referred to.

The most important questions to bring to your consideration today we believe to be:

First, what is the function of the nurse? and

Second, what content of education will equip her to fulfill this function?

THE FUNCTION OF THE NURSE

We conceive the nurse to be a remedial agent whose services calling her to all classes of society at frequent intervals and in intimate and prolonged association, is thereby afforded an almost unlimited opportunity for health education, which is the keynote of preventive medicine. This educational opportunity of the nurse is briefly but strikingly presented by Mr. Howk, of the Metropolitan Life Insurance Company, who says concerning the nursing service offered to their policy-holders for acute sickness and maternity care:

"It can be readily appreciated that a corps of trained nurses who make visits to 9,000,000 people a year are likely to exert a powerful influence in the education of these people in matters pertaining to their health"[3]

The number of people reached today through other agencies is many times 9,000,000.

In some of the fields to which the nurse is now called

[1]Training School Administration and University Schools, School of Nursing and Health at the University of Cincinnati, Science, July 28, 1916, editorial, p. 126.

[2]No place in Great Britain for Idlers. The Survey, October 6, 1917, p. 21.

[1]I am not attempting to discuss in this brief paper the frankly commercial schools known as the short course or correspondence schools, though they are, from the fact that they are turning into the field of nursing many hundreds of women yearly, a force to be reckoned with, and therefore should be included in any investigation of schools of nursing.

[2]"Survey of Schools of Nursing and List of Accredited Schools," California State Board of Health, March 3, 1917.

[3]Howk, H. J.: "The Public Health Work of a Great Life Insurance Company," the Am. Rev. of Tuberc., August, 1917, p. 380.

her function is almost limited to education, as, for instance, under the tuberculosis division of the departments of health or as school nurse, but we contend that the value of the nurse in the general field as an educator is quite as great, if, indeed, not greater. Who, for instance, would perform the wider service in preventing mental diseases, the general nurse who sees and understands the tendency toward mental deviations in the child, or the mental nurse who is called only when these tendencies have developed into a mental case? Is the instruction given by the tuberculosis nurse to the tuberculosis patient and the surrounding family (which she does not reach until the family have been exposed for months) of greater preventive value than instruction by a well-informed general nurse who finds her way into the insanitary tenements before tuberculosis has invaded them?

Conceiving, then—and we think there will be no disagreement on this subject—that we have in a corps of workers as numerically large as is the body of nurses a powerful instrument for the dissemination of knowledge concerning health and thereby for the prevention of disease, what shall be the educational preparation of this body and where shall it be obtained?

THE CONTENT OF NURSING EDUCATION

We are quite familiar with all the arguments relating to the impossibility of including in a three years' course all of the sciences required for a sound educational foundation and all of the specialties a knowledge of which, if it were possible to obtain, would of course be desirable. We do not believe that the scientific foundation should be left for these three years. We heartily agree with the emphasis which Mr. Pritchett, in his introduction to the study of medical education in Europe, places on the necessity of close co-operation between all institutions concerned with education. Indeed, much that he says concerning medical education may be well applied to nursing education.

"Not only," he writes, "is the whole civilized world today bound together in the discussions of all questions of scientific, educational and social progress, but also the people of a given nation are bound together by their common interests in such questions. Education in any nation is one thing, not a series of separate and unrelated things. Under modern social conditions a nation will therefore inevitably lack not only industrial power, but also social contentment and efficiency, if it fails to conceive its various educational difficulties as fundamentally a single problem to be worked out by the institution related in the most vital way to one another and representing together a national conception of progress and betterment."[1]

Concerning the value of the sciences to the medical student he says:

"Teachers of medicine readily admit that for students who have really mastered their elementary physics and chemistry and biology, medical education becomes a wholly different thing from what it is for those who have not gained that foundation, not only because the man so trained can begin at a different point, but also because he is familiar with scientific concepts, scientific nomenclature, and scientific methods of reasoning."[2]

How closely this relates to Lillian Wald's beautiful but practical conception of the function of the nurse of today:

"Many there are, it may be, engaged in the routine of public health work, who have not crystallized for themselves the import of their task. They are sturdy soldiers, who do not ask the reason for the command. But there are also prophets among the nurses and among the students of social movements who see the veil lifted and who know that the great army of nurses is educating the people, translating into simple terms the message of the expert and the scientist."[1]

We do not believe that any longer students should be permitted to enter schools of nursing who have not completed the course in a secondary school or a recognized equivalent.

Both in the secondary schools and the colleges we find courses in the sciences social and physical which might well be considered necessary to demand for the would-be student in nursing. One state, California, is already making such demands. Even so conservative a college as Vassar has provided for students, many of whom have not as yet determined and perhaps are never going to determine upon any vocation in life, courses the subject-matter of which should be part of the knowledge of every graduate in nursing, but which is part of the knowledge of only an insignificant few. Permit me to present one or two outlines that are particularly striking.

Advanced Human Physiology.—"Three lectures and four hours of laboratory work weekly. Lectures, recitations, special topics and their discussion, special readings, the microscopic examination of tissues, dissections and experiments. The laboratory is well equipped with anatomical models and the Harvard physiological apparatus for practical demonstration."[2]

Metabolism.—"This course includes discussion of processes of metabolism with corresponding experimental work in the laboratory, detailed experiments in physiology, of digestion and excretion, experimental tests of renal function, study of muscle metabolism, discussion of the physiological value of the various elements of food compositions, accompanied by experiments in special diet in the laboratory."[3]

Hygiene of the Child.—"This course comprises prenatal care, infant development and care, development and care of the child to adolescence."[4]

Municipal and House Sanitation.—"The principles of modern sanitation, including such subjects as water, sewage and garbage disposal, construction of habitations and the hygiene of transmissible diseases."[5]

Charities and Corrections.—"Sociological bearing of natural selection, heredity, environment, physical, physiological, psychological, moral, and social causes of abnormality, statistics of the causes of pauperism, history of the English Poor Laws, private relief, charity organization, public relief, almshouses, relief for the unemployed, including labor colonies and the tramp problem, dependent children, relief of the sick, insanity, statistics of the causes of crime, criminal anthropology, prevention of crime, principles that should govern the treatment of offenders, delinquent children, reformatories, prison methods."[6]

Concerning the practical experience, since the strength, such as she had, of the nurse has been directly attributable to her close and constant association with the case, this to my mind is perhaps the most important matter for our consideration. Not for worlds would we lose that priceless treasure which educators in other professions and vocations are seeking for their students, the practice field. The era of the *trained* nurse is drawing to a close. She will appear in the near future only in the history of the rise and fall of the apprentice system; but if history presents a faithful portrait she will be found there as an outstanding example of the value of a close relation between the student and the practice

[1] Pritchett, Henry S.: Introduction, The Carnegie Foundation for the Advancement of Teaching, Bull. No. 6, p. xi.
[2] Ibid., p. ix.

[1] Address of the President, National Organization of Public Health Nursing, Convention at Atlantic City, June, 1913.
[2] Vassar College Bulletin, Vol. VI, No. 3, 52d Annual Catalogue, 1916-1917, p. 118.
[3] Ibid., p. 119.
[4] Ibid., p. 118.
[5] Ibid., p. 115.
[6] Ibid., p. 64.

field. Despite many opinions to the contrary, I am willing to assert unhesitatingly that a proper division of the three years and a careful study and provision of the number of cases per student, that will provide a sufficient body of experience in the branches determined to be essential, will make possible the inclusion of all the important services in the nurse's experience, not, however, to the extent of preparing her for specialization; but the inclusion of these services will necessitate the requirement of courses in certain sciences already obtainable in high schools before admission to the school of nursing and the elimination of household duties the required experience in which could also be provided through a prevocational course.

What shall be deemed the essential branches must be determined by a study of the needs of the community, not by the branches found in any given institution. We are all familiar with the fact, which was somewhat astonishing to the public when first revealed, that greatly as the hospital capacity has increased in the past decade, it nevertheless cares or provides for but one-tenth of the sickness in any given community, city or town. This fact in its relation to the subject now before us gives rise to several questions. First, does this one-tenth that finds its way to the hospital represent the sickness problem of any given community, or only those ailments that can for certain reasons be best cared for in an institution? Second, shall the emphasis in the nurse's training be placed on those branches of diseases with which she comes in contact during her two or three years in the particular hospital in which she is trained, or those branches with which she is to come in contact during her professional life in the community? Third, and perhaps the most important question: which branches from the standpoint of the health of the community is it most important for health workers to be informed upon and to attack?

The survey of the hospitals maintaining schools of nursing of any state present the majority as dealing mainly with surgery and with an ever-increasing private patients' service, the latter not a good teaching field. It also presents a number of special hospitals giving two or three years in their specialty. The survey of any community in the United States presents a higher infant mortality than is necessary, a maternity mortality that places this country the fourteenth on the list, a tuberculosis mortality that is higher than the maternity mortality, a rapidly increasing number of mental cases,[1] and frequent outbreaks of communicable diseases. Nor does the war emergency reverse this situation as at first it promised to do. Reports from the other side show tuberculosis, infant mortality, venereal diseases, mental and nervous disturbances to be even more terrible concomitants of war than the injuries that relate to surgery; all of the evils that are being struggled with in civil life increased many times call for large numbers of nurses who are experts in these fields.

There is no reason why, because two-thirds of the service of a given institution is surgical, two-thirds of the student's time should be given up to that service. Just so much of that service expressed in numbers of cases and in weeks of experience should be used for the student as is required for that branch of the course, and provision should be made for the care of the remainder of the cases by a graduate force, or, if needed, for the *students* of other schools by such students.

In view of the fact that the curriculum issued by nearly every hospital maintaining a school of nursing almost invariably includes lectures and recitations on all of the branches of disease, it would hardly seem necessary to emphasize the importance of theoretical instruction in connection with this practical experience. But what is the relation between the theory provided and the practical field? An arrangement whereby in any school or college the laboratory work in chemistry, biology, or kindred subjects, was given in one year and the lectures in these subjects in another would be considered too extraordinary to discuss; yet just this method obtains in schools of nursing. For instance, the course in pediatrics may come in the second year, the lectures and recitations in the third. Or, it may be that the student is attending her lectures on surgery while she is obtaining her experience in the medical wards. It will be contended that it is impossible to arrange otherwise. It is under the present system, but that only emphasizes the absurdity of the system. When a school affiliates with another hospital, whether it be for a course in obstetrics, pediatrics, mental disease, or medical nursing—and such affiliations are very frequent today—it is expected that included in the course shall be lectures and recitations in these subjects, and usually these are arranged for. If not, the school sending its pupils considers seriously and quite justly severing the connection. We therefore contend that the readjustment required is possible; such readjustments mean, however, that no more than the school of medicine may be carried on without an endowment, and as a department of a hospital can a school of nursing any longer be carried on without such an endowment or as a department of a hospital. While the University of Cincinnati presents a wonderful picture of what a school of nursing should mean, the Harvard University presents an equally good picture of what a school of nursing might mean and does not. Grouped around the Harvard Medical School is a splendid set of buildings, modern in construction and equipped and representing most of the branches of disease a knowledge of which is not less important for the nurse than for the medical student. Nothing less than a university school of nursing a part of, if we like, or under the Harvard Medical School, would be expected today, but such is not the fact. Two of the hospitals maintain their own schools, and the work in all of the other institutions is mainly carried on by student nurses, but not from these two schools. None of the students in any of these institutions have the benefit of all the variety and richness of the clinical material which could so easily be available for them. It is incredible that a city of such vast resources and of such high educational standards as Boston should not yet have conceived that to make possible a Harvard school of nursing where all the splendid opportunities of the university should be available for the body of women who are rendering such conspicuous public service throughout the country today would mean to increase their efficiency almost an hundredfold. What a waste of human ability, what a waste of communities' moneys does their failure to do this represent!

How many tenths of community sickness receive inadequate or unskilled nursing care in order that one-tenth may be provided with a free nursing service, and what is the cost to the community of this inadequate and unskilled care are, we believe, important questions to be answered

[1] In 1915 there were in the hospitals having registered schools in New York State 53,031 beds, in the general hospitals 15,088, in the 15 state hospitals for the insane 37,943, an increase over the previous year of several thousand.

through the proposed investigation. What part of the burden of the nurse's education should the hospital assume, the school assume, and the nurse herself meet is another. The hospital cannot, in justice to the purposes for which it is erected, carry the whole burden of the professional preparation that the field of nursing demands today, but, if it cannot do this, then it should not attempt to maintain a school.

I have obtained from Miss Nutting, of the Teachers' College, the privilege of submitting with this paper her outline relating to the investigation of conditions of nursing education in the United States and the practical results that such an inquiry might produce that seem to very thoroughly cover the ground. I wish, however, to emphasize the importance of a thorough analysis of the actual case experience of the student. It is a not insignificant fact that, while records of efficiency, records of nursing procedure and ward services were easily available, there was not a record found two years ago throughout the length and breadth of the United States that showed the actual case experience of the individual students in any school. Indeed, the information relating to the student's experience often suggests that the physical structure of the hospital rather than the physical being committed to its care is the important factor in the nurse's education. A brief consideration of an institution presenting quite a usual picture will serve to illustrate my meaning. This institution with a bed capacity of eighty-five reports the following cases treated in one year:

Surgical	1186
Medical	702
Obstetrical	83
Children	32
Number of operations weekly	35

There are fifty-three students in the school. The three years' service is divided as follows:

	Years			Total in months
	1st	2nd	3rd	
Diet kitchen	90	..	.	3
Medical nursing	60	60	60	6
Surgical nursing	60	60	60	6
Obstetrical	..	60	60	4
Children	30	30	..	2
Operating room	..	..	90	3
Night duty	90	90	90	9
Tuberculosis	..	..	60	2
Dispensary	..	..	..	..
Contagious	..	..	..	..
Mental	..	..	..	..

Let us for a moment consider the daily average of the clinical material. Estimating the duration of the cases as three weeks, we have the following daily average:

Surgical cases	45+
Medical cases	41+
Obstetrical cases	3+
Children cases	2—

The period in the diet kitchen, three months in the first year, illustrates very well our contention of the need of prevocational courses. It is important that the student should have theoretical and practical instruction in the relation of diet to disease. An analysis of this three months in the diet kitchen, however, would show, we feel quite certain, that the experience mainly relates to cookery, time for which should not be taken at the cost of experience in the nursing care of disease.

A night duty may offer a very rich experience or it may be one of very little value. There is no indication in the record I am submitting of the experience the nine months' night duty provided. It is reasonable to suppose that this period was spent mainly in the surgical and possibly the medical wards. If but half of this period, four and a half months, is spent in the surgical wards, this, with the three months in the operating room, makes thirteen and a half months for surgery alone.

It is needless to call attention to the inadequacy of the children's service, but it is rather important to note that, since there are fifty-three students in the school, not less than twenty-five according to the period allotted to the service—one month the first year and one month the second—must obtain this experience yearly and through a service having a daily average of two cases.

In this schedule it will be noted that there is no period allotted to the dispensary service. One or two months is usually given to this department. An investigation will generally reveal, however, that not only does every student not have this service, but those who do obtain it only assist in the surgical clinics, since there only are their services needed. I am told that 15,000 children passed through a dispensary in New York in one year, but none of the students in the school of this hospital had the benefit of this experience. A most valuable field from the standpoint of a course in pediatrics was thereby lost to the nurses who graduated from this school. Such a field might well have been opened to the students in other schools also.

We could, if time permitted, present an almost endless list of illustrations of a failure even in our best institutions to provide for each student a definite period of experience in these branches of nursing that the sickness problem of the community demands, not because of their inability to procure such experience, but because of their dependence upon the free nursing service provided through the student body.

In addition to the list submitted, I would refer to the inspection forms for nurses' training schools issued by the Louisiana and Maryland State Boards of Nurse Examiners as suggesting data that would be of value in the proposed investigation.

INVESTIGATION OF THE CONDITION OF NURSING EDUCATION IN THE UNITED STATES

1. Problem of nursing education.
2. Why is an investigation necessary?
3. Outline of investigation.
   - (*a*) Work already done.—Miss Nutting's Report on Educational Status of Nursing, U. S. Bureau of Education, 1912.
   - (*b*) Hospital and schools.
   - (*c*) Separate schools.
4. Investigation of various fields of work in which nurses are now engaged.
5. Inspection of schools.
   - Hours of study.
   - Hours of teaching.
   - Hours of practical work—night and day.
6. Teaching by graduates; paid or unpaid; qualification of.
   Teaching by pupils.
   Lectures by doctors or other people; paid or unpaid.
7. Physical condition of the schools.
   - Dormitory or housing.
   - Conditions, board, laundry, etc.
8. Financial condition of schools.
   - Payment by pupils.
   - Payment to pupils.
   - Cost of maintaining pupils.
   - The capita cost per pupil for maintenance—for teaching.
   - Cost of teaching outside of hospital.
   - Cost of nursing by graduates, etc.

PRACTICAL RESULTS OF THE INQUIRY

1. Exact knowledge of the wide variations in curricula and practical work.

2. Definite knowledge of cost of education and saving to hospitals by utilization of pupil nurses.
3. Practical program for changes in present method of education, including:
   (*a*) Separation of school from hospital, graduates of schools having choice of hospitals according to merit at graduation.
   (*b*) Relief of nurses from maids' work in hospitals, which would improve the character of the hospital nursing.
   (*c*) Teaching of pupils by graduates paid for the purpose.
   (*d*) Shortening of hours of labor for nurses in hospitals.
   (*e*) Raising the standard of nursing, attracting more students of a better class.
   (*f*) Diminishing the number of schools by amalgamating many existing ones.
   (*g*) Diminishing cost of instruction by such consolidation.
   (*h*) Improving physical condition of nurses.

Health Centers of the City of Buffalo

March 11, 1916, marked the beginning of an important epoch in the history of the Buffalo Department of Health. On this date the provisions of new ordinances went into effect whereby the ten city physicians then under the direction of the superintendent of poor for the city of Buffalo were automatically released from their positions and four city physicians were employed on full-time at $1,800 a year, under the direction of the commissioner of health. The city was at the same time divided into four health center districts with a dispensary in each. A health center, according to the Buffalo Department of Health, is a miniature health department located in one section of the city in order to bring its activities into closer relation with the needs of the people. There is a city physician in charge of each health center district with morning (9-10), afternoon (1-3), and evening (7-8) office hours. Sundays and holidays the office hours are 9-10 in the morning.

The program of reorganization of the Buffalo health department includes the maintenance of uniform standard records with a system of interchange between the department of health, the department of poor, and all social service organizations, and a central dispensary, in addition to the health centers. The equipment in all health centers includes, in addition to the city physicians, an attending medical staff, department of health nurses and a registrar for taking history and keeping records. The city physicians are not permitted to carry on private practice. In addition to their office work they make home visits and hospital calls, and supervise the admission, care and discharge of city cases in the city hospitals. The scope of the work includes:

1. A well-baby clinic, where their nutrition and well-being is supervised and mothers are instructed.

2. A sick-baby clinic, where sick children are cared for, malnutrition cases being referred to the Children's Hospital and University of Buffalo service.

3. A nose and throat, eye and ear, and skin clinic.

4. A medical clinic, where all cases are treated except venereal diseases, which are referred to the Urologic Hospital, and tuberculosis cases, which are referred to the Tuberculosis Association Dispensary or the Municipal Hospital for treatment and disposition, according to their character, incipient cases being diverted to the J. N. Adam Memorial Hospital at Perrysburg, N. Y.

5. A prenatal clinic, where expectant mothers are guided through pregnancy, to secure healthy children and safe confinement.

6. A free dental clinic, with full-time service staff for school children in two health centers (in addition to the city's free dental service at the University of Buffalo).

The health centers are further utilized as distributing centers for milk and eggs, sputum napkins, etc., for tuberculosis cases, and for supplying the profession with laboratory outfits for the examination of pathological secretions, blood tests, etc., and which include Wassermann, Widal, paratyphoid, tuberculosis, pneumonia, diphtheria and gonorrhea examinations, and, finally, for the distribution of typhoid, diphtheria, and antitetanus serums, etc. Complaints relative to nuisances and offense are received and transmitted to the general office for suitable action.

The system includes a Urologic Hospital, with outdoor service, maintained at the Municipal Hospital, and supervision of midwives and their confinement cases. Both these progressive preventive activities are unique with the Buffalo Department of Health.

The Urologic Hospital (opened in 1914, prior to the health centers themselves) is maintained at the Municipal Hospital, with forty-six beds and an outdoor service. Medicine (excepting salvarsan, to those who can pay) and services are free to all classes, and the hospital is open to the profession for private cases, subject to approval.

The supervision of midwives and their confinement cases includes lectures, course of instruction (individual when indicated), the actual scrutiny of technic and skill in at least one obstetrical case, and the routine examination of surgical bags and outfits. Every confinement attended by midwife is investigated and the condition of mother and child overseen, with particular reference to the prevention of infective inflammation of the eye and the prevention of blindness. When eye shows inflammation or irritation a bacterial smear is taken and subjected to microscopic examination, and when infection is found to be present, an eye and ear specialist of the department takes charge of the case until recovery, or it is sent to a suitable hospital. Cognizance is taken of other pathological conditions and physical defects, and when present they are attended to in accordance with the indication. This progressive work has been very highly commended by authorities and particularly by the National Association for the Prevention of Blindness, while the actual operations and methods are made the subject of study and observation by medical men, nurses, and social workers for many places.

Experience shows that the health center brings the department of health in close relation with the people and elicits a responsive attitude. It secures the reporting of contagious diseases and lessens their spread. Morbidity and mortality are greatly influenced. Duration of sickness is lessened and restoration to health promoted by securing selective and appropriate hospital and other care for the sick and by following up cases of convalescence after institutional treatment. Prenatal and child welfare work makes for better individuals, and hospital patronage by pregnant women is increased. Traditional prejudice and distrust of hospitals and dispensaries is offset and hospital care of contagious cases increased. The system of uniform records and interchange prevents duplication of work and imposition by the unscrupulous.

The success of these centers is largely due to the invaluable assistance and cooperation of the Charity Organization Society, the District Nursing Association, the Tuberculosis Association, the Infant Welfare Milk Stations, and other organizations, and to the unselfish interest and industry of the public health nurses, whose valuable services should be extended.

BULLETIN OF THE AMERICAN HOSPITAL ASSOCIATION

Monthly Bulletin issued from the Executive Offices
728 Seventeenth Street, N. W., Washington, D. C.
WILLIAM H. WALSH, M. D., Secretary.

Committee Appointments of the American Hospital Association for 1917-1918—Brief Comment on the Duties of Each

COMMITTEE ON LOCAL ARRANGEMENTS

The members of this committee are to be named. This committee is usually appointed with special reference to the locality chosen for the convention—this year Atlantic City.

The duties of such a committee are many and limited only by the enthusiasm and energy of its members. Heretofore this committee has not only provided the membership with a most cordial reception, but it has provided funds to meet certain expenses incidental to the convention.

This year the association will be obliged to meet extraordinary expenses in connection with the convention, and it is hoped that the committee on arrangements may be able to raise sufficient money to meet the following expenses: four registration clerks (five days); printing of booklet; two stenographers (five days).

The president is exofficio a member of this committee and in his absence the secretary will attend meetings, and aid and assist the committee in every way in his power. In the organization of this committee it has been found advisable to form a number of subcommittees, as follows: (a) transportation; (b) entertainment; (c) hotels; (d) receptions; (e) publication of booklet; (f) publicity.

Transportation.—This subcommittee should make all arrangements for the reception of members at stations and their transportation to various hotels. It is also concerned with any local arrangements that may be made for automobile rides, etc.

COMMITTEE ON NON-COMMERCIAL EXHIBIT

The members of this committee are to be named. The non-commercial exhibit is intended to be of value to the members of the association, and if the proper conception of such an exhibit is kept in mind there is no reason why it cannot be attractive. While past exhibits have been more or less commendable, there has been a tendency to display exhibits of very doubtful value. Unless an object possesses some novelty or originality there is little use in showing it, and each commonplace exhibit detracts from the value of the whole, while it utilizes space that might be occupied by something of real worth.

Dolls, for instance, however beautiful or unique, are lacking in interest unless they are used for the purpose of emphasizing some new part of a uniform or nurses' equipment. Hospital executives are not interested in the various colors of uniforms nor in the innumerable shapes of caps; but a new cuff, or short sleeve, a more useful cap, shoe or apron or some other innovation that indicates more comfort to the nurse, would immediately attract attention and excite interest.

Ordinary clinical charts are of little interest unless some new idea is introduced, either for the more efficient registration of clinical data, for the more facile teaching of the nurses, or for more exact recording of information obtained by the physicians. Exhibits of institutional industrial departments are always welcome, and are of intense interest to all those affiliated with hospitals for the insane, tuberculosis, and chronics.

Home-made instruments or appliances, when embodying new ideas, are a great help and incentive to those institutions that do not realize the extent to which the mechanical force can be utilized when not busy with the usual routine.

COMMITTEE ON OUT-PATIENT

Chairman, Mr. Michael M. Davis, Boston; Dr. Robert J. Wilson, New York City; Mr. John E. Ransom, Chicago.

This committee is one that has been actively engaged for a number of years in an intensive study of the many problems connected with dispensary work. In addition to the duties already delegated to this committee, the association has entrusted it with the task of formulating certain standards for dispensary practice, it being the intention of the American Hospital Association to adopt at an early date a definite policy upon certain questions relating to out-patient practice.

The report of this committee may be read before the Out-Patient Section, but a copy must be in the hands of the secretary at least one month prior to the convention.

COMMITTEE ON PUBLICATION

Chairman, Dr. William H. Walsh, Washington, D. C.; Dr. H. K. Mohler, Philadelphia; Mr. H. E. Webster, Montreal, Que.

This committee is entrusted with the publication of the annual transactions, and has the power to authorize or forbid the publication of all or any part of such minutes or papers as a part of the proceedings of the association or in any paper or magazine. It is apparent, therefore, that this committee has considerable power as to the disposition of any or all papers read before the association, and in such matters the committee's decisions are final.

The committee consists of three members of the association, one of whom shall be the secretary, who shall be chairman.

COMMITTEE ON LEGISLATION

Chairman, Mr. Howell Wright, Cleveland, O.; Oliver H. Bartine, New York City; Dr. George O'Hanlon, New York City.

This committee has been created in response to the wishes of the association, and its function is of importance to every hospital in the country. The members should keep in frequent touch with each other and with all pending legislation that affects hospitals directly or indirectly.

It is the duty of the legislative committee not only to keep informed upon such matters, but also to oppose by every legitimate method the introduction of laws, national or local, that are contrary to the interests of the hospitals represented by our membership, and to aid by every possible means the passage of legislative measures that may favor hospital interests and thereby the public welfare.

This committee will submit a report to the association to be presented at the annual convention, outlining the work that has been accomplished and summarizing the legislation of interest that has come to the attention of the committee.

COMMITTEE ON MEMBERSHIP

Chairman, Dr. William H. Walsh, Washington, D. C.; Sister M. Genevieve, Youngstown, O.; Miss Minnie Goodnow, Brockport, N. Y.

All applications for membership in the American Hospital Association must receive the approval of this committee before the applicants may become members. It shall be the duty of the committee and each individual member thereof to scrutinize carefully the names of all new applicants with the object of preventing the entrance into the association of anyone who may be ineligible or otherwise undesirable.

This committee shall consist of two members of the association and the secretary, who shall be the chairman, and who may be delegated to perform the duties of the committee; the names of all prospective members, however, must be sent to at least one other member of the committee for approval or disapproval, and if disapproved the names shall be submitted to the full committee.

It is also the duty of each member of this committee to secure by every possible means new members for the association.

A report of the activities of the committee is required for presentation to the association at the annual convention.

COMMITTEE ON NOMINATIONS

Chairman, Dr. Louis B. Baldwin, Minneapolis, Minn.; John Anisfield, Cleveland, O.; Dr. Louis Burlingham, St. Louis.

This committee is one of the most responsible to which a member may be accredited, and its members are entrusted with grave responsibilities.

The president requests that at the earliest possible date the chairman of this committee communicate with the other members with the object of learning their views upon the qualifications of prospective candidates. It is hoped that definite conclusions will be reached and a report formulated prior to the convention so that the absence of one or more members will in no way embarrass the association.

Candidates to be elected at the forthcoming convention are as follows: (1) president; (2) trustee (one); (3) vice-presidents (three); (4) secretary; (5) treasurer.

COMMITTEE ON NECROLOGY

Chairman, Dr. Frederic Brush, White Plains, N. Y.; Miss Laura E. Coleman, Buffalo, N. Y.; Miss Ida M. Barrett, Grand Rapids, Mich.

It is desired that a record be kept of all deceased members, and that whenever possible suitable minutes be presented and adopted by the association.

In furtherance of this object a committee on necrology has been named, the duties of which shall be to present, at the time of the convention during a general session, such information regarding deceased members as may have been obtainable.

COMMITTEE ON AUDITS

Chairman, Dr. W. E. Woodbury, New York City; Mr. Daniel D. Test, Philadelphia; Miss K. M. Prindiville, New London, Conn.; Mr. Cornelius S. Loder, New York City.

The auditing committee will be expected to go over all the accounts of the association at the end of each calendar year and shall submit a report thereof in triplicate, sending one copy to the treasurer, one to the secretary, and the third shall be presented to the association at the next convention. If, in the judgment of a majority of the committee, it is expedient to employ an expert accountant, they shall be authorized to engage one who shall have full authority to consult all the records of the association.

COMMITTEE ON CONSTITUTION AND RULES

Chairman, Mr. Richard P. Borden, Fall River, Mass.; Dr. D. J. Clark, Toronto, Ont.; Mr. Pliny O. Clark, Wheeling, W. Va.

The business of the association will be expedited in the future if all proposed changes in the constitution and by-laws are submitted to this committee some time prior to the convention. Very often an apparently simple little change will require, if adopted, a whole revision of the constitution and by-laws unless formulated by those who are extremely well acquainted with that instrument. The constitution and by-laws should never be revised hurriedly for the very good reason that every sentence and clause bears a direct relation to some other part and cannot be considered without reference to the whole.

When proposals are made during a convention for changes or modification in our by-laws, they will be invariably referred to this committee before consideration.

COMMITTEE ON SOCIAL INSURANCE

Chairman, Dr. Thomas Howell, New York City; Dr. Edward N. Brush, Towson, Md.; Mr. G. W. Oleson, Minneapolis, Minn.

The war has in no way decreased the many problems connected with the various phases of social insurance, and it is expected that immediately upon the cessation of hostilities some form of social insurance will be adopted in every state in the Union. Already many have accepted workmen's compensation as necessary, and such legislation is no longer in an experimental stage.

The next inevitable step is health or sickness insurance, and it would seem as though this, too, would soon be enacted into law in some states. Hospitals are very vitally affected by these measures, and it is expected that this committee will carefully study this vast subject in so far as it relates to hospital service.

COMMITTEE ON PREPAREDNESS

Chairman, Dr. S. S. Goldwater, New York City; Dr. W. H. Smith, Baltimore; Dr. W. E. Musgrave, San Francisco.

The "Liberty War" has multiplied hospital problems many times, and as the conflict continues our institutions will be confronted with conditions which can hardly be anticipated. It is also extremely important that all civil hospitals readjust themselves to changed conditions as rapidly as possible in order that the almost overwhelming odds against them may not seriously interfere with the very necessary work they are performing.

The war has only begun and already many institutions are flying distress signals, so that it is evident that unless very radical changes are made in past practice and customs some hospitals at least will be driven to close their doors. It is to obviate such calamities that this committee has been appointed, and it is the desire of the president that the committee lend every aid in its power by means of bulletins and other publicity to those hospitals seeking or desiring advice during the period of readjustment.

COMMITTEE ON STANDARDIZATION OF HOSPITALS

Chairman, Dr. Winford H. Smith, Baltimore; Dr. F. A. Washburn, Boston; Dr. W. L. Babcock, Detroit.

The president has considered it expedient to reappoint the former committee *in toto* for the reason that the members are also an advising committee to the committee on hospital standardization of the American College of Surgeons and have already established working relations with that body. The war has necessarily interfered with the activities of the committee, but it is hoped that the com-

mittee will keep in close touch with other organizations working along similar lines, and that it will formulate an independent program for presentation when the occasion arises. If any steps looking toward the standardization of hospitals are to be taken, it is manifest that this association should take a very lively interest therein since our membership is most vitally interested.

COMMITTEE ON HOSPITAL ACCOUNTING

Chairman, Dr. A. R. Warner, Cleveland, O.; Dr. O. F. Ball, St. Louis; Mr. Cornelius S. Loder, New York City.

A considerable amount of work has already been accomplished by this committee, but much still remains to be done. It is hoped that eventually plans may be formulated which may be adopted as standards, so flexible as to be adaptable to all hospitals. The committee that is responsible for such an accomplishment will receive the very grateful thanks of the members of this association, and will have rendered a very real service to the hospitals of the country. It is expected that in the proceedings of the new committee careful consideration will be given the work that has already been performed by preceding committees upon the same subject.

COMMITTEE ON DEVELOPMENT OF THE ASSOCIATION

Dr. Ralph B. Seem, Johns Hopkins Hospital, Baltimore; Mr. John E. Ransom, Central Free Dispensary, Chicago; Dr. J. W. Fowler, City Hospital, Louisville, Ky.

COMMITTEE TO COOPERATE WITH THE MILITARY SERVICE

Chairman, Dr. S. S. Goldwater, Mt. Sinai Hospital, New York City; Mr. Daniel D. Test, Pennsylvania Hospital, Philadelphia; Mr. Richard P. Borden, Union Hospital, Fall River, Mass.; Dr. A. R. Warner, Lakeside Hospital, Cleveland, O.; Dr. William White, St. Elizabeth's Hospital, Washington, D. C.

DELEGATES

Delegate to American Medical Association, to be named.

Delegate to American College of Surgeons, Dr. A. B. Ancker.

Delegate to American Public Health Association, Mr. Michael M. Davis.

Representative, Medical Section, Council of National Defense, Dr. S. S. Goldwater.

The First Private Yacht Given for an Ambulance Ship

The distinction of being the first private steam yacht presented to the government for use as an ambulance ship belongs to Dr. John A. Harriss' yacht, the *Surf*. Dr. Harriss equipped the boat completely for hospital work and, through the New York County Chapter of the American Red Cross, turned her over to the government for the duration of the war. The *Surf* was built in 1898, has a tonnage of 270, is 166 feet long, with two decks, and is equipped with a wireless outfit. As a hospital ship, the vessel has cabin accommodations for twenty-five patients; its equipment includes operating rooms and convalescent wards. Dr. Harriss, who has been commissioned medical director of the ambulance ship, has undertaken to pay all the expenses of the maintenance of the vessel, and will pay the salaries of the doctors and nurses as well.

A similar patriotic action has been taken by Mr. Albert C. Burrage, of Boston, who has likewise given the services of his private yacht to the government for an ambulance ship, and no doubt other owners of yachts will emulate the generous example of Dr. Harriss and Mr. Burrage.

DEPARTMENT OF NURSING

Conducted by MISS ANNIE W. GOODRICH,
Teachers' College, Columbia University, New York City.

Please address items of news and inquiries regarding Department of Nursing to the editor of this department, Teachers' College, Columbia University, New York City.

THE EFFECT OF THE WAR ON THE NURSING SITUATION ABROAD

A Report of the Subcommittee on Public Health Nursing

SUBMITTED BY ELIZABETH McCRACKEN, Editor, Committee on Nursing, General Medical Board, Council of National Defense.

It must be said at once that this report, at the present time, is of the most fragmentary and tentative character. The reports of the British Ministry of Munitions, relating to matters of health, and reports of the Local Government Board of Great Britain, of a medical character, filed in the Library of Congress and in the Surgeon-General's Library, have been examined. (There are not a great many of these in the library. The statement is made that it is too soon to expect to receive a great number of them; and that many of the few that have been received are in the Bureau of Documents, waiting to be classified.)

In addition to the examination of this material the library of the Children's Bureau has been consulted; annual reports of known local organizations have been examined; recent numbers of medical journals have been read; and there has been a little correspondence with well-informed and reliable persons. The following facts have been gleaned:

There are two fields in which there is a shortage of nurses. One of these is in industry; so far as one can judge, the nursing forces here have not been diminished, but owing to the increased number of workers, the former force is not sufficiently large, and the additional nurses needed cannot be secured, owing to war conditions. In Memorandum No. 10 of the Health of Munition Workers Committee of the British Ministry of Munitions (dated January, 1916), entitled "Sickness and Injury," stress is placed throughout on the importance not only of the nurse, but of a sufficient number of nurses in a munition factory. Not only first aid is regarded as imperative, but also instructive work. The memorandum says:

"The committee has therefore had to consider the prompt treatment of minor injuries, as well as the prevention or treatment of more serious conditions. . . . They are satisfied that not only should advice and instruction be given to the worker as to the proper steps to be taken on the occurrence of accidental injuries, but that suitable arrangements should be made in all munition factories for the effective organization of means of emergency treatment. . . . Any instructions issued should be simple and precise. . . . Wherever possible a trained nurse should be on regular duty. . . . The committee are satisfied of the urgent necessity and value of some such organization as that suggested above. They have been much impressed in visiting munition works with the useful part performed by competent nurses, and the large number of cases of injury or sickness which receive treat-

ment. . . . In 11 moderately sized works, employing about 35,000 workers, 38,000 surgical dressings were performed in the first ten months of 1915. . . . Two other munition works report that in the last half of October, 1915, the nursing staff dealt with 2348 and 2028 cases respectively. . . . While such data point to the need for first-aid work, information obtained from another munition factory suggests that the need today is proportionately greater than in normal times. . . . In the autumn of 1914, when the hours of work were from 8 a. m. to 5:45 p. m., an average of 100 first-aid dressings were done at this factory each month, per thousand employed; in 1915, for the same period of the year, when the hours of work were from 8 a. m. to 8 p. m., the average rose to 292, and at night, when the hours of work were from 8 p. m. to 8 a. m., to 508. . . . The committee are convinced that, both on grounds of health and of securing improved output, this subject demands the immediate attention of employers."

Memorandum No. 8 of the Health of Munition Workers Committee of the British Ministry of Munitions, entitled "Special Industrial Diseases," after a discussion of these diseases, concludes by saying:

"Facilities for the prompt treatment of all cases of sickness and injury are of special importance in factories where poisonous substances are used. The nature and extent of the facilities necessary have already been discussed in the committee's Memorandum on Sickness and Injury."

From Miss Margery Bryce (a niece of Lord Bryce), who, during the winter of 1915-16, helped regularly on three nights a week to prepare and dispense coffee to the women workers in a munition factory near London (the name of it was cut out by the censor), I learned that there was in that factory great need for nursing care during that winter. Miss Bryce, who is 26 years old, said in one letter:

"I had money to pay a nurse, but could not get one to come; they are going to the front, or nursing in convalescent hospitals at home."

This statement was not made as the result of an inquiry; it was simply part of a personal letter, describing the factory, that I received before I had begun this investigation. I have written to Miss Bryce since for more details; but have not yet had a reply.

From Lady Mond, wife of Sir Alfred Mond, member for Swansea, I have received a very satisfactory letter, and also three reports. Lady Mond is the founder of the Swansea Mothers and Babies' Welcome, a school for mothers and creche. This work was begun in 1911, and is the first organized baby welfare work that has ever been done in Wales.

The work of the Babies' Welcome is a combination of instructive visiting nursing, Little Mother work, Mothercraft, and relief, which relief takes the form of free dinners to expectant or nursing mothers. There is a well-baby clinic, a dental clinic for the mothers, and prenatal work. The head of the Welcome is a trained nurse, and there is a visiting nurse who is called "Nursery Matron."

The following figures are of interest: during the year 1914, 20,192 dinners were supplied; 494 mothers came weekly to the "health talks" (Mothercraft section); 234 babies came regularly to the clinic; 700 maternity cases were cared for by the nurse. It is an interesting fact that this nurse, Miss Bragg, who is also a midwife, took, during this year, owing to the scarcity of physicians, 33 obstetrical cases. The reports are full of references to the work of this particular nurse and of her importance in the borough. The next year, 1915, 9,393 dinners were supplied. The decrease from 20,193 in 1914 was due to the fact that the increased separation allowance provided by the government reduced the number of needy mothers. Six hundred and ninety mothers came regularly to the "health talks." Four hundred and forty-two babies were brought regularly to the well-baby clinic. The number of maternity cases, however, is only 263, as compared with 700 of the previous year. The following quotation from the Annual Report gives the reason for this:

"Thursday afternoon is the only time the superintendent can spare for visiting at the home. . . . Nurse Bragg was called last May for war service, and we have been unable to fill her place."

In 1916 the number of dinners supplied fell to 3433; 434 mothers came to the "health talks"; 273 babies were brought to the clinic. As for the visiting, it still was impossible to obtain another nurse to take Miss Bragg's place; and the report says:

"The number of visits was 253. . . . Nurse Gwynne, one of the town's health visitors, held the health talk, but the visiting suffered."

In a letter from Lady Mond, dated September 16, 1917, she says:

"The Swansea work, like all charitable work needing a nurse, has suffered by reason of the war. The nurses are off for France."

The reports of the Local Government Board and of the Carnegie United Kingdom Trust do not reveal any shortage of nurses, while they do show very definitely that public health work, especially in relation to infants and child-bearing women, has increased since the beginning of the war. It is a fact which must not be forgotten that "health visitors" in England and Wales are not always, or necessarily, trained nurses. The British attitude toward this matter may be seen in the following words from the "Report on the Physical Welfare of Mothers and Children," issued by the Carnegie United Kingdom Trust, Vol. I:

"Many health visitors' posts are at present quite efficiently occupied by persons whose preliminary training has been of a widely different kind, such as that of school teacher, or in business, or kindred occupations, followed by instruction in sanitation, hygiene, domestic science, sanitary knowledge, physiology, etc. Intelligent women so trained, and with a liking for the work, make very good officers, but, on the whole, it is found that the nurse's training has a closer bearing upon the subsequent duties. . . . Other sources of supply may be found among young women who, after a training at one or other of the universities, take up the subject of social science, and become exceedingly useful on a health visitors' staff."

The fact that there has been little difficulty in increasing the number of health visitors (from 600 in March, 1914, to 812 in December, 1915, and up to 1000 in 1916) is explained partly by the circumstance that they are not necessarily trained nurses and by the increased desire on the part of the other types of workers mentioned to do patriotic work.

However, the report does make this remark:

"In considering what the ordinary training and qualification should consist of, it must be borne in mind that the objects of her (the health visitor's) appointment are the lessening and prevention of disease, and the promotion of health—objects which in her particular sphere are identical with those of the medical officer of health in his. The analogy therefore suggests itself that, as in the case of the *medical health visitor—the medical officer of health*—the essential basis of his usefulness rests upon his training in medical science, supplemented by the special study necessary for the degree or diploma in public health, so it will be found that the *nurse's* training is the best groundwork for a health visitor. This implies various things, e. g., a sufficient preliminary or general education; the valuable asset of three years' training in

co-operation with others similarly engaged, a discipline which leads to development of character, and an increased consideration, either natural or acquired, for others; also the administrative experience involved in ward work is always useful."

Dr. Rott, director of the Organization for Infant Preservation in the Kaiserin Auguste Victoria Haus, in a report quoted by Dr. Grace L. Meigs, of the Children's Bureau, in her paper on "Infant Welfare Work in War Time," says:

"It is certainly a deplorable fact that a large number of infant welfare visitors and attendants at the beginning of the war offered themselves for the care of the wounded (although in this department there was an oversupply of nurses), and so withdrew themselves from the extremely necessary infant welfare work."

"Dr. Rott's report was based on a questionnaire sent to 788 infant welfare centers, 266 institutions for the care of mothers and babies, and 271 day nurseries. The replies to the questionnaire disclosed the fact that the centers which have been closed were those which depended on private subscription, and that especially characteristic of private associations was that tendency of the nurses to leave infant welfare work for military duty. Dr. Rott's investigation was confined entirely to Germany.

In France, infant welfare work has greatly increased since the war. The infant welfare work has taken the form of confinement care for mothers, and the providing of milk. Also, considerable provision has been made, and more projected, for the care of children by their own mothers, rather than by foster mothers. This has been largely a financial matter, attended to by means of allowances. The extent, if any, to which the details of this work have been carried out by nurses is not mentioned in the reports.

In Belgium, as in practically all the other warring countries, there has been a marked increase in infant welfare work since the beginning of the war. Dr. W. P. Lucas, in an article entitled "General Health Conditions in Belgium After Two Years of Relief Work," published in the *Journal of the American Medical Association*, in 1917, gives the figures as to this work, and mentions the part taken in it by nurses. He says:

"Previous to the war there were only two material canteens in the whole of Belgium; today there are 329 canteens for infants. These canteens, in connection with the educational work, the medical supervision which all the canteens have, and the careful regulation of the dietary, both in the canteens and by an extensive system of nursing in the homes, have undoubtedly had a marked effect on this great reduction in infant mortality."

Dr. Lucas does not speak of any difficulty in getting visiting nurses. In Belgium, as in Great Britain, the visiting nurses are not in all cases, nor even in the majority, trained nurses; they are volunteer workers. Since the war, there has, in all countries, been a decided increase in the number of women volunteers.

Dr. Lucas quotes Dr. Gengow, secretary of the Anti-Tuberculosis Society of Belgium, as saying that tuberculosis has increased among the poor since the war. There is an increase of tuberculous adenitis among children. As a remedy, Dr. Gengow recommends as follows: an increase in tuberculosis dispensaries, with special visiting nurses.

An American woman who, up to the outbreak of the war, had lived a number of years in Rome, and who is very much interested in the method of caring for the incurably tuberculous in that country, makes the statement that this work has been greatly crippled by reason of the war. The cause is not that nurses cannot be secured, but that there is not money to pay them. She has shown me letters from a member of a board of directors of this work in Rome, who makes this statement. Placing tuberculous patients in country homes, and having them there visited and supervised, is the method of work. Without the visits and supervision, this brings serious results. Not all the supervisors and visitors are nurses; but the main ones are.

In New Zealand, the maternity and infant welfare nursing has definitely suffered, owing to the shortage of nurses, called to military duty. In 1916, nurses from the Karitane Hospital had to be requisitioned for public health work, owing to the fact that a great many Plunket nurses had left for the front. The Annual Report of the Royal New Zealand Society for the Health of Women and Children makes the following statement:

"As arranged with the government authorities when war broke out, no new residential centers for Plunket nurses have been created during the year."

The arrangement referred to is described in the report for 1915. The reason given is contained in the following quotation:

"In some districts where sufficient funds had been collected to enable the local committees to apply for the government grant of 24 shillings for each pound supplied, the central council asked them to hold the matter over in the meantime, and to work quietly without the Plunket nurse, getting an occasional visit from the nurse as a stimulus to continued effort. This was done at the request of the government, in view of the greatly increased public expenditure which the war was involving."

In Canada, where the public health nursing is done by the Victorian Order of Nurses, the war has had a decided effect. The report of the board of governors of the order for 1915 says:

"The war has affected the order in several ways—our increases are not as great, we have not opened up new districts in cities, many of which were ready to organize when the war broke out."

During that year, 28 of the 292 Victoria nurses left for the front.

In 1912 a fund was established by the Duchess of Connaught for rural nursing in the remote sections of Canada. Since the war it has been difficult to secure nurses to do this work. The report makes the statement that "many districts ready to receive nurses have had to go without them."

Perhaps, of all the countries at war, Canada is the one most seriously affected by the shortage of nurses. All the reports give evidence of this, even when they do not give actual statistics.

I am constrained to say again, in concluding this report, that it is of necessity partial and fragmentary. The reasons given at its beginning need not be repeated. Since writing its first draft I have, however, added to it. Moreover, after adding to it, I hear of still other reports soon to be available for examination, in which I may find other facts and figures. I therefore submit this report as a first edition, with the promise of a second, and very likely a third and a fourth edition, later. The facts given, few and incomplete as they are, yet clearly lead to two conclusions:

First, that where public health nursing has been done abroad by nurses, it has suffered greatly owing to the departure of nurses to the front.

Second, that the increase in public health work abroad calls for more "health visitors" than ever before; and that in several countries it is recommended strongly that these be nurses—for obvious reasons.

October 18, 1917.

THE WAR: ITS HOSPITAL, MEDICAL AND NURSING ASPECTS

TRANSPORTATION AND CARE OF THE WOUNDED AT THE FRONT*

Speed of Transportation an Element of Prime Importance —Development of Casualty Clearing Stations Saves Many Lives

"The Development of British Surgery at the Front" is described in a recent number of the *British Medical Journal* by Surgeon-General Sir Anthony Bowlby and Col. Cuthbert Wallace.

At this, the "advanced dressing station," there is a personnel of two or three medical officers, non-commissioned officers, and orderlies, and it is here that the first-aid dressings can be supplemented by additional dressings and by

Fig. 1. Interior of regimental aid post.

suitable splints, so as to insure a more easy transit to the "tent section" of the field ambulance, a mile or two further back.

The field ambulance has not needed to undergo any very radical changes during the war, because its constitution and personnel proved it to be thoroughly well suited to its duties. But its surgical equipment has been very greatly improved and increased, so that it is in all respects well supplied for the performance of any urgent operation undertaken for conditions which do not require that the patients should be retained for any length of time.

It is the supply of motor ambulances alone that has made it possible to deal adequately with the surgery at the front.

One aspect of this subject, however, is very commonly overlooked, namely, the use of motor transport in saving the wounded from capture, for there can be no doubt that, had motor ambulances been supplied in large numbers, the tale of British prisoners after Mons and Le Cateau would have been very small. The first complete convoy came to the front in the middle of October, and at the first battle of Ypres was of the utmost possible value, both in getting patients quickly to the casualty clearing stations and also in saving wounded from falling into the hands of the enemy during our retirement to the ground we subsequently held.

The motor ambulance, indeed, is the very foundation on which all British surgery at the front is based. Without it the whole system would break down, for no horsed vehicles could possibly deal with the numbers of a heavy fight unless they were so numerous that they would practically block the roads for all other transport, and even then their slowness would result in such delays in delivery that surgery would be of little use. In addition, the well-hung and well-driven motor causes the patient infinitely less distress than the old ambulance wagon, and so delivers him in a much better condition for recovery.

The question of time is a matter of so much importance to surgery that it is well to explain the time that is required to take a patient from the front trenches to the

Fig. 2. Handling a stretcher around a corner of communication trench.

casualty clearing station. It is, in the first place, not sufficiently realized that the chief cause of delay, if it occurs, is "the enemy," for there have often been, and there still are, localities from which the wounded can only be moved under cover of darkness, so that a man may have to be kept in a dug-out the whole of a long summer's day before he can be carried to the rear. Again, in the desert of mud behind the firing line on the Somme stretcher-bearers sometimes took hours to carry a wounded man at night for several miles to the nearest point to which, in the absence of all roads, an ambulance wagon could approach. In yet other cases men lie out in the open ground on the so-called "No Man's Land" for many hours, or even for several days, before they are rescued. But supposing that none of these difficulties exist, the time occupied is very short, for, if communication trenches are good, and if a man is

*The illustrations used here are shown by courtesy of the *New York Medical Journal*, the originals appeared [illegible] *Medical Journal*.

able to walk, he will often get to the advanced sections of the nearest field ambulance within an hour. If the communication trench is long and muddy, it may take twice that time. If he has to be carried, it may take another half hour or more, but as soon as he has got to a good road another hour will see him safely delivered to the place

Fig. 3. Advanced dressing station of field ambulance.

where his injuries can be thoroughly treated and where he can be well nursed under excellent conditions.

All this is comparatively simple if no great battle is in progress; and as great battles occur at infrequent intervals, it is evident that in most parts of the line of trenches evacuation is easy and rapid except for unusual local conditions. But in very heavy fighting, and especially when troops are advancing, it is often impossible to find sufficient stretcher-bearers in proportion to the great numbers of wounded, for only a limited number are attached to each regiment, and it is therefore necessarily true that the greater the number of the wounded who have to be carried, the longer must it be before the last of them can be brought in. No work is heavier than stretcher carrying for long distances and on difficult ground; and as men become exhausted and their pace becomes slower, and they are obliged to rest at more frequent intervals. But even when all difficulties have been surmounted and the patients have arrived at the tent sections of a field ambulance, there are many who are too much exhausted for further immediate moving; and while the staff may have their hands full with dressing the wounded, they have also to care for the needs of the many men who need to be rested, fed, and warmed. While they are thus engaged on these patients, all those who require urgent treatment by operation have been taken direct to the casualty clearing stations, and thus have avoided delay.

Fig. 4. Interior of advanced dressing station.

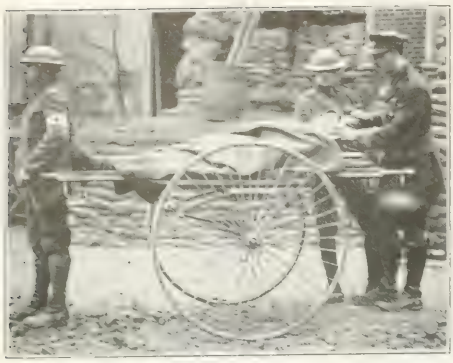
The development of the casualty clearing stations has been the most important factor in the creation of a new school of surgery at the front, and it is not too much to say that they have saved many thousands of lives which would have been lost but for the surgical opportunities which they have provided.

Before the war the "C. C. S.'s," as they may be named for brevity, appeared only on paper and as untried units, for they did not exist at the time of the South African war. They were originally called "clearing hospitals," and their proposed function was merely to clear the field ambulances and pass the patients on to the base hospital. Their equipment, therefore, was only very slight, and their staff of eight officers, including the command officer and the quartermaster, was less than the staff of a field ambulance. They carried 200 stretchers, and were supposed to be able to deal with the same number of patients.

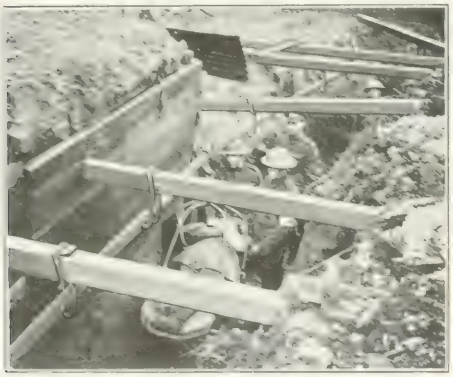
These hospitals, for such we call them, are situated behind the line of trenches along the entire front, and certain local conditions are essential for the success of their work. First, they must be at or near to railway sidings, so that evacuation by train is easy. Secondly, they must be where good roads can connect them with the front. Thirdly, they must have a good water supply.

They are arranged in practically two series: (1) those nearest the front are at a

Fig. 5. Shows how compact the wheeled stretcher is when closed.



distance of from six to nine miles from the front trenches; (2) those of the second line are from three to six miles further back, and act as a reserve during active operations, or as units for special cases during quieter times.



The casualty clearing stations vary greatly in their accommodation, according to the size of the buildings they may occupy, or to the amount of ground available for huts or tents when they are encamped. The smallest accommodate 400 to 500, and the largest from 800 to 1,200. Their staff is reinforced, as may be required, from other casualty clearing stations less actively employed, and from the staffs of the field ambulances.

Wherever possible the casualty clearing stations at the front are linked in pairs, and take in the wounded alternately. In this way it can be arranged that, after admitting as many as can be adequately treated, the wounded are diverted to the other casualty clearing stations, and the staff is left free to treat those they have admitted, without being disturbed by fresh arrivals.

When a casualty clearing station is housed in buildings these theaters must, of course, vary in size with the accommodation afforded. In the hutted or tented hospitals, however, which are the most numerous, the operating theater is a hut about 60 feet by 20 feet, giving space for four tables, and for sterilizing and store rooms. Large theaters are essential in dealing with large numbers.

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NOTES ON BRITISH MILITARY MEDICAL ARRANGEMENTS

Work in the Restoration and Reeducation of Disabled Soldiers—Treatment of Cases of Heart Disease

BY A RETIRED ARMY SURGEON.

Continued from November issue.

THE RED CROSS SOCIETY

The work of the Red Cross organization has frequently been referred to in these notes. Its activities are unceasing and the field of its operations extends into every part of the area involved in war, as well as throughout the British Isles. The famous Star and Garter Hotel, at Richmond, having been pulled down, a new building is now in course of erection, to constitute a home hospital for helpless patients. Meantime the annex previously mentioned has been divided into wards, and a lift provided, by which the patients, bed and all, can be carried up to the garden level, and thence wheeled onto the terrace, where they may enjoy the view of the Thames, which itself at this time of the year has an active therapeutic value. The neighboring mansion, Ancaster House, has been bought by the Red Cross Society, and is intended to be a home for officers suffering from incurable injuries. At Brighton five separate buildings, all of them, however, situated close together, have been constituted an auxiliary hospital for officers, provided with an operating theater and all necessary appliances. There are several special features in this establishment, particularly a most complete department for electrical and physical methods of treatment, including such special methods as ionization and whirlpool baths; these latter, of the original French pattern, were presented by the Princess Royal. The open-air treatment is carried out to its full extent, practically all the patients passing the greater part of each day in tents on a lawn facing the sea; the recuperative and invigorating effects of "Doctor Brighton's" treatment are thus enjoyed to the full. One hundred and thirty-three patients are accommodated in the buildings, and in addition a number attend as outpatients.

One branch of the work of the British Red Cross Society consists in the organization and supply of convoy sections; that is, completely equipped and staffed ambulance cars. This useful work has been in operation since the quite early days of the war in the autumn of 1914, many cars having been provided by citizens of the United States and driven by their owners. Much of this work is carried on along roads that are, to some extent, exposed to the ene-

my's fire. Each section is complete in itself, having its own repair lorry and traveling kitchen. Another contribution of the Red Cross Society was the provision of a fleet of dental motor ambulances, to work so far forward as to be within reach of the men in the trenches, thus providing relief for the innumerable cases of "toothache," including all lesions of the teeth and gums, which, though in one sense trivial, as affecting the life of the sufferer, are, from another point of view, the cause of much distress. Under the conditions that obtained during the winter, it can easily be imagined that such assistance would be of immense value. On account of the very large number of men who nowadays are provided with artificial dentures, which under campaigning necessities are liable to get out of order, much inconvenience and suffering is unavoidable, but the provision of relief, right up to the front, within reach of the trenches, has been a very great boon.

After the withdrawal of the British forces from the Dardanelles the considerable hospital provision of the Red Cross Society was transferred from that area to Egypt and Mesopotamia; ten launches equipped for the accommodation and transport of wounded were at work on the Tigris, each carrying sixteen lying-down cases, and from fifty to sixty men able to sit up. A hospital ship to accommodate fifty patients in cots, with full equipment, including an ice-making machine, was also sent to the Tigris. Among the special points connected with the design and construction of this vessel was the requirement that her draught should not exceed 30 inches of water, owing to the peculiarities of the river channel. The Red Cross Society has also equipped and despatched twenty-four ambulances and a traveling x-ray apparatus for use on the Italian front; this latter has been especially valuable, as many as sixty cases of wounded having been radiographed, often actually under fire, in a single day. The British Red Cross ambulance unit was the first to enter Gorizia, crossing the bridge over the Isonzo under fire. Altogether four British units of this society were rendering aid to the Italian army.

The emblem of the Red Cross having been used in irregular and unauthorized fashion on several occasions and in many different places, the society, after consultation with the War Office, issued explicit instructions in regard to this matter: the emblem may be displayed on the ambulance vehicles for transport of sick and wounded and hospital stores; on private houses handed over to the military authorities for the reception of sick and wounded soldiers (provided written authority for this purpose has been received from the War Office); in this case the Union Jack must be flown alongside; and on the uniform of the personnel of the society and of voluntary aid detachments, duly recognized.

BRITISH PRISONERS IN SWITZERLAND

In May of last year an agreement was arrived at by which British prisoners in Germany, and German prisoners in Britain, suffering from certain diseases and infirmities, were released from imprisonment and interned in Switzerland. The selection of these cases was carried out by a commission of Swiss medical officers in conjunction with British medical officers in Britain, and with German medical officers in Germany. The chief diseases and infirmities rendering prisoners eligible for this transfer that were agreed upon were: tuberculosis, both of the lungs and of other organs; chronic affections of the respiratory, circulatory, and digestive systems; grave nervous disorders, and chronic poisoning by chlorine or carbonic oxide. The first train from Germany with British prisoners, conveying 32 officers and 272 men, reached Zurich on May 29; on the following day another train arrived with 150 men. These parties were taken to Chateau d'Oex, in the Vaud canton, a favorite health resort, both in summer and winter, standing at an elevation of 3,180 feet. They met with a friendly welcome all along the route from the Swiss people. In August two other parties, numbering altogether 862 officers and men, arrived in Switzerland, being distributed between Chateau d'Oex, Leysin, and Mürren. Leysin stands at 4,750 feet elevation, in the same canton, some six miles to the east of Geneva, and is sunny and well sheltered. Mürren, at a height of 5,368 feet, is one of the most frequented places in the Bernese Oberland, both in summer and in winter, and commands one of the finest mountain views in the whole of Switzerland. All of these places are in the highest degree adapted for the restoration to health of the sick and wounded, under ideal conditions of climate, and in the midst of a population benevolently neutral at the least.

MEDICAL ARRANGEMENTS IN MESOPOTAMIA

The extraordinary difficulties encountered by the Indian expeditionary force under Sir Percy Lake, in its attempt to relieve the garrison of Kut-el-Amara on the Tigris, have been the object of much comment during the last few months. The medical staff was overworked and undermanned; the climatic conditions and difficulties of transport were almost incredibly adverse to the British force, and, as regards the medical services, the greater part of the personnel and material in the country had been shut up in Kut, so causing the relieving force to be but scantily supplied. It is even now impossible to describe, or even ascertain, what actually happened, but one relieving circumstance appears in the otherwise melancholy narrative of events, the civilized behavior of the Turks in regard to the wounded of the British forces. After the attack on Sannaiyat, by mutual consent parties went out under the Red Cross and the Red Crescent, respectively, to collect the wounded, and after the surrender of Kut all the more serious cases of wounds and sickness in the garrison were handed over to the British in exchange for an equivalent number of Turkish prisoners. The hospital arrangements were much criticized on all sides during the earlier months of the expedition, when the management was in the hands of the Indian army authorities; much of this criticism was based on imperfect information and want of acquaintance with the realities of the situation. Since the control was taken over by the War Office, up to the end of 1916, five general hospitals, five stationary hospitals, one casualty clearing station, three Indian field ambulances, and three motor ambulance convoys had been sent out, with a personnel of over 800 medical officers, 500 nurses, and more than 2,000 medical attendants.

MISCELLANEOUS NOTES

In an article by Surgeon-General Sir Alfred Keogh on "Surgical Organization in War," two most important principles were laid down and elaborated as to the duties of the army medical service. Its first and most important function is the maintenance of the strength of the army in the field, by taking every precaution for the prevention of disease; the second is the collection, removal, distribution, and care of the sick and wounded. In the circumstances of the present war, the operations of which exceed in magnitude all previous military experience, the regular officers of the army medical service have been required, in very large proportion, for administrative duties; that is, the looking after the practical details of the organization, maintenance, working, and adaptation to requirements of

hospital establishments in the field and on lines of communication, while the more strictly professional duties of medical and surgical care of the sick and wounded have been performed, to a very great extent, by civilian physicians and surgeons, and, what is also of great importance, and an outstanding feature in the present campaign, as compared with former experiences, the scope and standard of practical work and scientific investigation, the fixing of a "surgical policy," has been entrusted to these experts. They supervise the operations and approve the operators, and determine whether the means at the disposal of the surgeons are or are not adequate in every respect. From this it results that the standard aimed at and the results obtained are very much higher and more satisfactory than in any previous campaign. Never before has so wise and liberal a policy of striving for the best results in the medical and surgical care of troops in the field, in camp, and in hospital, been carried out, or even consistently attempted.

A "Casualty Clearing Station" is the technical name for the place where sick and wounded at the front can receive immediate treatment before being despatched to the base; but its resources must be sufficient to deal with cases so serious that they cannot be allowed to travel further; such as, for instance, abdominal wounds that require immediate operation, and fractured thigh; also cases of severe shock. These latter are put to bed, warmed, and given injections of coffee, or brandy, or saline solution. As many as four hundred cases may be admitted at a time. The operating room has to be well lighted, and its walls are enameled white. All cases that pass through are examined, and many have their dressings renewed. Red blankets for the beds are in general use, and impart a cheerful note of color to what might otherwise be a depressing, or at any rate disturbing, environment.

As an example of rapidity in dealing with a large number of wounded, may be quoted what happened on the arrival of a hospital ship at Dublin, carrying 502 patients, of whom 329 were cot cases; i. e., serious injuries needing lying-down accommodation. Unfortunately, rain was falling at the time of disembarkation and distribution of this large number of disabled men; awnings had to be erected, and waterproof sheets provided for all the patients during their removal. The stretcher work was carried out by the British Red Cross and St. John Ambulance organizations. An ambulance train was in readiness at the North Wall landing place, by which 20 cot cases and 130 sitting-up patients were taken off immediately to Belfast. The remaining 309 cot cases and 43 sitting-up patients were divided amongst the various hospitals in Dublin, the largest numbers going to the Dublin Castle Red Cross Hospital (70 patients), and Dr. Steeven's Hospital (50 patients); the rest were distributed among ten other hospitals. At the North Wall landing stage 120 orderlies were employed in this work, and at the various hospitals 149 orderlies. The removal of patients was effected by motor ambulances, some belonging to the Army Service Corps, the Corporation, and the Pembroke Urban District Council, and some lent for the purpose by the Irish Automobile Club. The whole business of disembarkation and removal was accomplished between 9 a. m. and 1 p. m.

"What can't be cured must be endured," is the very worst and most dangerous maxim for a nurse which ever was made. Patience and resignation in her are but other words for carelessness or indifference—contemptible, if in regard to herself; culpable, if in regard to her sick.—Florence Nightingale, "Notes on Nursing."

DEPARTMENT OF DIETETICS

Conducted by MISS LULU GRAVES,
Dietitian of Lakeside Hospital, Cleveland, Ohio.
Please address items of news and inquiries regarding Department of Dietetics to the editor of this department, Lakeside Hospital, Cleveland, O.

DIETITIANS MEET AT CLEVELAND

Two-Day Session Brings Enthusiastic Gathering and Permanent Organization

The first national meeting of the American Dietetic Association was held in Cleveland, Ohio, October 18 to 20. Representatives from twenty-one states and from Canada were present, and an enthusiastic and highly important session was held. As this was the first attempt made at organization the registration was highly gratifying. It gave strong evidence that our dietitians are awake to the problems of the day, and anxious to keep in step with the march of progress.

Major C. F. Hoover, chief of the medical staff of the Lakeside Hospital of Cleveland, gave the opening and welcoming address on Thursday afternoon. This was a very practical talk, giving many important facts concerning food conservation and some interesting facts in regard to war conditions in France, whence he has only recently returned.

Miss Lulu Graves, dietitian of the Lakeside Hospital of Cleveland, as temporary chairman of the conference, explained the reasons for assembling the dietitians, and told how by concerted action we may raise our standards and give to our work a broader outlook for the future.

A round table on food conservation was conducted by Miss Cooper, of Battle Creek, Mich. In the evening Rev. Caroline Bartlett Crane, chairman of the Michigan Section of the Woman's Council of National Defense, told what the Woman's Council of National Defense is doing for this country, and discussed the problem of food conservation also, impressing upon us the necessity of each one of us doing our bit to preserve foods and avoid waste; Mrs. Crane urged that all dietitians place their "expert knowledge and valuable experience" at the service of the woman's clubs, and all who need it.

Following this paper a short business meeting was held. The purpose of the association was discussed more fully and a decision made to form an organization to be known as The American Dietetic Association.

Friday morning Dr. Ruth Wheeler, of the University of Illinois, gave some very interesting results which she had obtained from experimentation on both animals and people at the university.

Miss Sawyer, of the University of Iowa, read an excellent paper on acidosis in which observations were taken on different children to show their susceptibility to acidotis. She showed by charts and figures the effects of anesthesia and starvation upon some children who develop acidotis after operation. An interesting discussion on diabetic

acidotis followed this paper. Dr. Ruth Wheeler told of some good results obtained at the University of Illinois in cases of constipation and indigestion.

Miss Violet Ryley, general organizing dietitian of the Military Hospitals of Canada, told what is being done in Canada for the returned and invalided soldiers, in the recuperative hospitals. The position of the dietitian in these hospitals in a very important one and is recognized as such by the Canadian government.

The paper on "Hotel Management" by Mr. John Willy, of the *Hotel Monthly*, was read by Miss Mary Jones, of Battle Creek, Mich.

Miss Louise Pollock, dietitian of the City Hospital, St. Louis, Mo., read a paper on "The Dietitian and Her Equipment."

On October 20 Dr. Lewis, of the Battle Creek Sanitarium, gave a stereopticon lecture on the value of laboratory reports to the dietitian.

Miss Elva A. George, dietitian, Bureau of Instruction, Washington, D. C., read a paper telling the different phases of work which are open to the Red Cross dietitian.

Miss Lulu Graves, dietitian of the Lakeside Hospital of Cleveland, told of the work which can be done and is being done by "The Dietitian as the Doctor's Assistant." This is a comparatively new field, but a field full of opportunity for the person who is willing to do hard work and much of it.

In the absence of Miss Rena Eckman, her paper on "The Standardization of Dietetics and the Training of the Dietitian" was read by Miss Phyllis Dykeman, of Grant Hospital, Columbus, Ohio. This paper will be published in THE MODERN HOSPITAL.

At a final business meeting a constitution and by-laws were adopted and the following officers were elected for the coming year: president, Miss Lulu Graves, of Lakeside Hospital, Cleveland, Ohio; first vice-president, Miss Lenna Cooper, of Battle Creek Sanitarium; second vice-president, Miss Violet Ryley, dietitian of Military Hospitals of Canada; corresponding secretary, Miss Maude A. Perry, of the Michael Reese Hospital, Chicago; recording secretary, Miss E. M. Geraghty, Grace Hospital, New Haven, Conn.; treasurer, Miss Emma Smedley, director Department of School Luncheons, Philadelphia, Pa.; executive committee, the foregoing, with Dr. Ruth Wheeler, University of Illinois; Miss Edna White, University of Ohio; and Mrs. N. M. Wood, dietitian of the Methodist Hospital, Omaha, Neb.

It was decided to accept the invitation of the American Hospital Association to become a section of their organization next year.

Tuberculosis Department of San Francisco Hospital From the Dietitian's Point of View

BY HELEN ABBOTT, Dietitian, San Francisco Hospital, San Francisco.

Having found a satisfactory plan for feeding 260 tuberculosis patients outdoors, I am passing it on in hopes that it may help some one else, especially those interested in city and county work.

We had temporary buildings, lack of system, long distance from the main kitchen, the help situation, and inclemency of the weather to contend with. Little at a time we have improved conditions, putting in a diet kitchen to every two wards. These are not alike because we had to adapt our wants to existing conditions, but we have adopted a pattern that we consider efficient, which is something that kitchens so often are not because architects have never worked in one (Fig. 1).

The greatest discovery which we have made is the bain marie. In this we heat our hot-water plates, which we fill with clean water once a week for sanitary reasons. As there is no air hole opposite the water funnel, it takes so much time to fill them that we could not think of doing it oftener; moreover, the method of immersing them in the hot-water bath makes them hotter than when they are filled with hot water—so hot, in fact, that they stay hot for two hours. A coup soup plate is used for cover. The cost

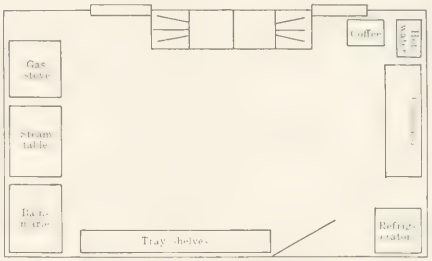


Fig. 1. Ward diet kitchen of the tuberculosis department, San Francisco Hospital.

of this is small, as it is one of the items on our yearly contract. These plates are now manufactured in this country, so that it is possible for any hospital to get them. The American product is lighter than the European and can be more easily repaired, but has the disadvantage of not being quite so water-tight. It is, however, quite satisfactory.

As fast as possible we are putting women into the diet kitchens, so that practically the same system now holds in the tuberculosis department as in the main hospital. The work for the ambulatory patients is now being improved. There is little that can be done in the temporary buildings.

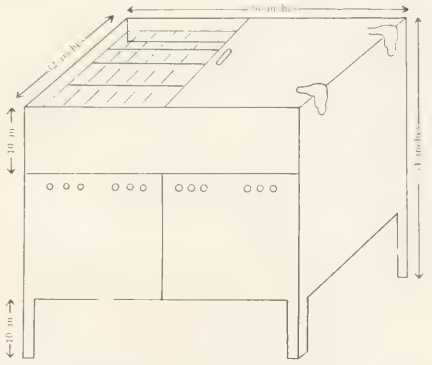


Fig. 2. Bain marie, one cover removed to show plate rack. Each compartment measures 9¾ by 4 inches. Gas or steam coils may be used to heat the bath. Water is let in and out by turning of valves. Lower part may be used as plate warmer.

Plans are being made for the cafeteria plan of feeding in the new building. This will keep waste to a minimum, as the patient will have some choice. Also, he will be able to wait on himself in part, which is a good idea. This will keep him from thinking that he must be waited on in regard to every little thing and thus becoming lazy in mind as well as in body.

Our second study has been menus. Many menus for tuberculosis patients have been sent us, which we appreciate very much, but none of them seemed to be adapted

to our needs and conditions. Most of our patients come from the working class of people. Many of them have anorexia. After months of study a type menu has been adopted which is varied somewhat from week to week and season to season.

As soon as our diet kitchen situation will permit, more will be done for the larynx and intestinal cases. Comparing the menus one with another, certain similarities will be observed, as: no lima beans; no hash or hashed-up foods, as combination salads; few sweets. If money were less limited, scraped beef sandwiches, steaks, or chops would be given twice daily, and cream soup of some kind

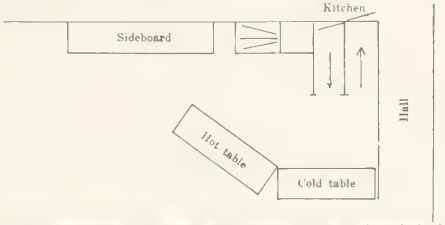


Fig. 3. Arrangement of tables for a cafeteria in the tuberculosis department of the San Francisco Hospital.

daily. This is not possible here. The nature of the disease is such that twice-cooked foods are injurious, while cheese dishes, salads, and gelatin, which are theoretically good for patients, are not practical because the patients never had them at home. Approximately 3,000 calories daily is served on a regular diet. This may be increased by the giving of nourishments, but most of the visiting physicians consider this about right for a day's ration if in the proportion of one part fat, one part protein, and two parts carbohydrate. Nourishments are given bed patients when ordered, at 10 in the morning, 2 in the afternoon, and 8 at night. It has been found better to give the heavier meal at night, in spite of the fact that the majority of the patients are used to dinner at noon before coming to the institution. This is because the patient usually has an elevated temperature in the morning and does not feel like eating. By night the temperature has gone down, the patient feels better and can eat a heavier meal.

TYPICAL WEEK'S MENU

Breakfast	*Lunch*	*Dinner*
	SUNDAY	
Farina.	Stock soup.	Roast mutton.
Eggs.	Cold meat.	Dressing.
Toast.	Cold slaw.	Buttered carrots.
Coffee, milk.		Spice cake.
	MONDAY	
Rolled wheat.	Rice tomato soup.	German meat roll.
Eggs.	Lettuce salad.	Mashed potatoes.
Toast.	Steak.	Apple sauce.
Coffee, milk.		
	TUESDAY	
Rolled oats.	Lima bean soup.	Beef stew, vegetables.
Eggs.	Macaroni creole.	Baked potatoes.
Toast.	Cheese.	Corn bread.
Coffee, milk.		Stewed prunes.
	WEDNESDAY	
Cornmeal mush.	Cream potato soup.	Boiled beef.
Eggs.	Asparagus.	Bouillon potatoes.
Toast.	Peach tapioca custard.	Plain cake.
Coffee, milk.		Strawberries.
	THURSDAY	
Farina.	Vegetable soup.	Irish stew.
Eggs.	Rice and fruit.	Steamed potatoes.
Toast.	Prune square.	Stewed peaches.
Coffee, milk.		
	FRIDAY	
Rolled wheat.	Clam chowder.	Baked fish.
Eggs.	Fish salad.	Dressing.
Toast.	Bananas.	Steamed potatoes.
Coffee, milk.		Stewed figs.
	SATURDAY	
Rolled oats.	Spanish rice.	Baked beans, pork.
Eggs.	Barley soup.	Lettuce salad.
Toast.	Carrot pudding.	Stewed apricots.
Coffee, milk.		

Nourishments consist of the following: beef tea, cocoa, milk, malted milk, orangeade and lemonade.

NOTE.—Since the foregoing article was written, more money has been appropriated for the tuberculosis department, making it possible to have rather better food, including chicken and ice cream on Sunday. We also have an assistant dietitian, who is over the kitchens. She has already made many improvements, giving special attention to the intestinal cases.

J. Ogden Armour on the Truth About the Price of Meat

What makes high prices? Is there anyone today who is not concerned with this question? Many people are busy trying to find the answer. We have numerous government appointees who are making investigations of the situation as controlled by the producer, and an equal number of local authorities in every community investigating in the interests of the consumer, but no one has found a solution, and not a great deal has been done in reducing prices.

It is with more than usual interest, therefore, that we read a communication from one of the largest food purveyors in the world. In *Collier's* for September 15 is an article by J. Ogden Armour, in which he discusses "The Truth about the Price of Meat." He says that the people have a right to know the factors that enter into determination of prices, and that these factors should be explained to them by the purveyors of food. Such prices as are "shown to be justifiable or unavoidable" should meet with the approval of the American people. "For, after all," he says, "business cannot exist without the consent of the people, and ought not to exist without their approval."

In the following statements the present price of meat is shown to be justified by the increased cost of raw material, and by the service which the public requires:

"Meat is such an important item on the American table that its increased cost has attracted attention and comment somewhat out of proportion to the rate of advance.

"Meat price increases are not due to big profits, so far as the meat purveyors are concerned. . . . It is actually a fact that the fresh meat from the steer or hog or sheep is sold by the packer to the retailer at a figure which often fails to pay for the raw product—that is, the animal on the hoof. The profits which enable the packer to handle meat at less than cost are due to the utilization of those portions of the animals which until recent years were wasted or destroyed.

"It is necessary that there be a profit in raising meat animals if the supply is to keep pace with the demand. The world demand for food was never greater than it is today. . . . Demand, in short, has run away from supply.

"It is my opinion, however, that before the price of meat, and other food products as well, can be materially reduced, there will have to be a far-reaching change in the demands made by the public upon the retail trade. . . . He [the retailer] is compelled to charge in the neighborhood of 20 percent of the cost price of each article or each pound of meat, in order to cover the cost of doing business. . . . The retailers will welcome a change in the national methods of retailing which will enable them to reduce their cost of doing business."

No one questions the fact that we have too many stores, and that there is no need for so many deliveries daily; but whether this has been brought about by the demands of the housewife or because the retail dealer was attracted by profits to open up a business for himself still remains a question. Did the housewife demand a delivery several times a day or did the retailer offer it as an inducement to get business, until now, in the face of so great competition, it is necessary?

We would think it inconsistent on the part of the con-

sumer to demand a retail shop in every block when so many of them do not patronize the shop nearest them—and we know that is frequently the case.

Mr. Armour sums up the situation and suggests a remedy in the following paragraphs:

"In the first place, there are too many stores. It is obvious that if there were only a third as many as now exist, each one would do about three times the volume of business it is doing now, and a huge amount of overhead and fixed expense would be cut off, making it possible to sell goods on a much smaller margin than is now the case. Those merchants who are doing a legitimate business should be aided, but I believe the public has the same right to limit the number of stores as a means for reducing prices as it has to limit the number of saloons as a means for combating the liquor evil.

"If the people of today would adopt the cash-and-carry system of purchasing instead of clinging to the credit-and-delivery plan, it would be a boon to both dealer and consumer.

"In a word, when the buying public permits the retailer to dispense with frequent and costly deliveries, when consumers pay their bills promptly so that the merchant can meet his obligations before having to pay interest, when the quick-moving advertised and standardized foods crowd the slow-moving stuff off the shelves, and when the number of stores is limited to a point which will permit of a big business being done by each, then, and not till then, will the retailer be able to pass meat and other foods along to the consumer at a price which will not seem high when compared with the wholesale price thereof."

This is a logical conclusion and a plausible way of remedying the conditions to some extent. Undoubtedly the credit system is an expensive one to the merchant, yet there must be some compensations, or it would not be encouraged as it has always been. From our earliest recollection we have heard merchants say that the customer who had the largest account was, in the majority of cases, the hardest one from whom to collect. At the same time, the man who buys on credit will generally receive more consideration in every way than the cash customer. Very often when he pays his bill, or part of it, he gets something that the cash buyer does not get, even though it is only a cigar. The man who has an account gets his name on the book; this assures him many courtesies that the cash customer does not receive. The cash customer may be a good patron for many months and still be unknown by everyone in the house. This is particularly true in the larger retail stores.

We agree with Mr. Armour in regard to the conditions he mentions and the disadvantages resulting from them, but we do not believe that the buying public is the chief offender in bringing about these conditions.

Connecticut Association of Dietitians Meets

The Connecticut Association of Dietitians held an annual meeting on November 7 in the dormitory of Grace Hospital, New Haven. The following officers were elected: president, Miss E. M. Geraghty, New Haven; vice-president, Miss Laura Siegel, Sanford; secretary and treasurer, Miss Ethel C. Pipes, Hartford. We are very glad, indeed, to know of this state organization and shall hope to hear of the most interesting things which they will be doing during the coming year.

I will look straight out—
See things—not try to evade them.
Fact shall be fact for me,
And the Truth the Truth forever.
—A. H. Clough.

CURRENT HOSPITAL LITERATURE

ALBERT ALLEMANN, M. D., Foreign Literature.
Army Medical Museum and Library, Office of the Surgeon-General, United States Army

Experiences with the Quartz Light Treatment. P. Sokolow, M. D. Corr.-Bl. f. Schweiz. Aerzte, 1917, XLVII, No. 21.

The use of quartz light has of late been greatly extended, especially in the war hospitals. The author has employed this treatment in the Polyclinic of the University of Zurich in a great number of cases, not only for skin diseases, but also for internal and nervous diseases. The results in cases of skin affections were very good. The method is of great value is neurasthenia, enabling the patients to sleep. A case of bronchial asthma, two cases of dry plurisy, and four cases of surgical tuberculosis were completely cured.

The Canton Medical Missionary Union. China Med. Jour., 1917, XXXI, No. 3.

Almost all the Protestant missions of the province of Canton are represented in the Medical Missionary Union, which owns and manages one of the largest hospitals in Canton. The Chinese take a great interest in this institution. The first and the present presidents of China, two cabinet ministers, and other prominent state officials have generously subscribed to the funds of this great hospital. The present president of China sent $5,000, stating that this was the only hospital to which he would make a donation, because it was the first hospital on Western lines to be established in China. The hospital has lately celebrated its eightieth anniversary, at which the governor, the foreign consuls, and a large representative body of Chinese and foreigners were present.

Arrangement and Management of a Large Barrack Hospital During the War. M. Steffelaar. Ziekenhuis, Amsterdam, 1917, VIII, No. 8.

The author gives a lengthy description of the large Austrian reserve hospital at Olmütz in Moravia, where the Dutch Red Cross worked during the winter of 1916-17. This hospital contains 2,000 beds and was originally established by the Province of Moravia, but in June, 1916, was taken over by the medical department of the Austrian army. It is favorably located on an elevated plane at some distance from the city and connected with the railroad by a branch line. In front are the administrative buildings. The center is taken up by twenty long one-story barracks arranged in three rows. On one side are the kitchens and other incidental buildings, and on the other the railroad station. The large interspaces are taken up by flower and vegetable gardens. Cement walks connect the various buildings. The greater part of the barracks are built in wood, but as the price of lumber rose it was necessary to build the other barracks in brick. As the climate of the region is very hot in summer and very cold in winter, a cement wall was built within the

wooden walls with an interspace of 15 cm. between the inner and outer wall. The floors are of cement and are washed every six weeks with an oily fluid to make the cement more compact. The roofs are of boards covered with asphalt. Several barracks are taken up by Russian and one by Turkish wounded. A medico-mechanical institute is connected with the hospital. It contains the most varied apparatus for the treatment and reeducation of the maimed soldiers.

Coordination of Tuberculosis Activities in Ohio. J. R. McDowell, M. D. Ohio Pub. Health Jour., 1917, VIII, No. 5.

Though the antituberculosis movement in Ohio was started only about ten or fifteen years ago, a great amount of work has been accomplished, and the state ranks well toward the top in comparison with the other states of the Union. The present equipment consists of 463 visiting nurses in 68 stations, 27 free dispensaries in 19 cities, open-air schools in 4 cities. There are 2 municipal hospitals with a total of 770 beds, 3 county hospitals with 286 beds, 4 district hospitals, supplying 16 counties, with 237 beds, a state sanatorium with 166 beds, and several smaller institutions. The total number of beds is 1,527. But the number of cases of tuberculosis amounts annually to 30,000. Though only about one-third of this number may need hospital treatment, the present hospital provisions fall still far short of the actual needs.

Urgent Need of Establishing Heliotherapeutic Institutes and Stations for the Ambulatory Treatment of Osseous, Glandular, and Incipient Pulmonary Tuberculosis. *Signora* Cozzolino. Tubercolosi, Milano, 1917, IX, No. 12.

The Antituberculosis Society of Genoa has established a heliotherapeutic institute for the treatment of surgical tuberculosis in children. The patients remain from morning till night at the institution, where they are exposed to the sunlight under competent medical supervision. The children are given a meal at noon and in the evening they go to their homes. The results have been very good. As such heliotherapeutic station requires no large outlay of money, the author proposes to establish similar institutions in all the cities of Italy. But he adds that heliotherapy requires much special knowledge and experience in order to be successful. It is therefore necessary to place these institutions under special nurses who are thoroughly trained in this method of treatment.

The Carrel Hospital at Compiègne and the Treatment of War Wounds. L. Cherubini. Riv. osp., Rome, 1917, VII, No. 8.

The author visited the famous Carrel Hospital located at Compiègne, 50 miles northeast of Paris. He was impressed with the energy and enthusiasm of the French medical officers. He ascribes a large part of the great success of the hospital to the diligence and careful work of the nurses who are almost all volunteers. When the wounded arrive at the hospital they are most carefully examined by x-rays and other methods. The wounds are opened up well and carefully cleaned and all fragments of projectiles and cloth fibers removed. Sterile rubber tubes are then inserted, with end closed, but provided with numerous lateral openings. Every two hours 20 or 30 c.c. of Dakin's solution is injected through this tube. With the exception of a small strip of gauze no bandages are applied. Recovery under this treatment is remarkably rapid. Patients who seemed to require many months of treatment are completely cured in from fifteen to thirty days. The author concludes by stating that from what he has seen this is the only true and rational treatment of war wounds.

Plan of a Pavilion for Infectious Diseases for a Town of about 30,000 Inhabitants. H. J. Fesevur. Ziekenhuis, Amsterdam, 1917, VIII, No. 7.

The number of cases of infectious diseases has enormously increased since the war started, the author states. All the hospitals in Holland had to make special arrangements to meet this new demand. The author gives a sketch of a pavilion for infectious diseases which was erected for the Dortrecht Hospital. It is a long one-story building with six rooms of four beds each. At each end is a room containing six beds. In front runs a full-length veranda. Along the back runs a corridor communicating with all the rooms. Behind this is a second narrow corridor whose communicating doors are closed and which is used only by the physician and the chief nurse on their visits. In this corridor there is an arrangement for disinfection and change of upper garments.

Reconstructing the Cripple; a Pioneer Institution in Copenhagen, Denmark. Margaret Monrad. Am. Jour. Care Cripples, N. Y., 1917, IV, No. 2.

In 1872 Rev. Hans Knudsen founded a society for the care of crippled children. Its aims were twofold: to establish a clinic to alleviate or cure the various ailments and to found a school which, working in touch with the clinic, would give the patients training in a suitable occupation or trade. For the first few years the society rented private buildings for its purposes, but the membership grew so rapidly and so many donations were made by private parties that the society was soon enabled to erect its own buildings, which are located on one of Copenhagen's most beautiful parks. The institution has now a permanent staff of physicians and nurses, its own hospital, and a sanatorium at the seashore. During the year 1914-15, 6,173 patients were treated; of these, 773 were treated free of charge. The institution has its own school where the children within the school age are educated. After they leave the school they enter one of the shops, where they learn a suitable trade.

The Psychiatric Services of the War. A. Alberti. Riv. osp., Rome, 1917, VII, No. 9.

Three months after Italy entered the war it was necessary to establish special psychiatric services in the medical department of the army. As it was not advisable to treat the mentally deranged men in the same hospital with the other soldiers, special pavilions were constructed on the same plan and arrangement as the observation pavilions in modern hospitals for the insane. The buildings are only of one floor and are divided in rooms to contain not more than ten patients. These hospitals were established behind the front. Gradually, as necessity required, other pavilions were added, so that the buildings finally represented quite extensive observation hospitals for demented soldiers. The men whose condition requires treatment in institutions in the interior of the country are transported on special cars to Milan, Rome, and other cities.

Suggested Improvement for Out-Patient Work With Children. Stafford McLean, M. D. Arch. Pediat., 1917, XXXIV, No. 3.

In spite of radical improvements in a few dispensaries, the chief characteristic of present out-patient work, Dr. McLean says, is slapdash haste, incomplete diagnosis or none at all, snap diagnosis, and poor laboratory work or none. The pride of the dispensary head is not in the

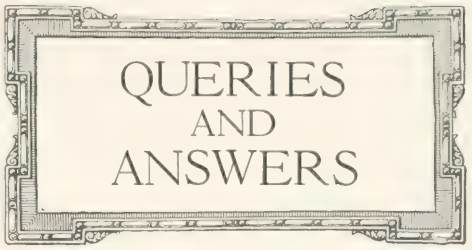
quality of the work done, but the number of cases seen daily. The patient "is too poor to pay for the services of a physician; in the eyes of the clinic worker too ignorant to understand directions relating to his medical condition; not sick enough to be admitted to the wards of the hospital, but wise enough to know that he will get as much relief from a bottle of patent medicine or the gratuitous advice of a lay friend as he will by returning in a week's time to the dispensary for more of the slapdash treatment."

It is not the number of patients seen, but the excellence of the treatment given, that should be the boast of the chief of the clinic. The time spent on the "one-visit" patient is wasted. Follow-up work should be done if the patient does not return for treatment on the day appointed. The average clinic worker will argue that dispensaries that are already overcrowded will become intolerably congested if follow-up work is done. Dr. McLean's reply is: "If the only method of preventing overcrowding is to give poor service to those who seek medical relief, then the dispensary should be abolished. . . . I am certain, at least as far as children's dispensaries are concerned, that unless they are very good they should be entirely abolished." He suggests two alternative remedies: that the number of clinics be increased with more intelligent reference to the density of population, or that longer clinic hours be kept, with a shift of physicians.

Dr. McLean divides dispensaries into three classes: those run in connection with hospitals, those affiliated with medical schools, and those without medical affiliations. Those managed in connection with hospitals are mainly used as feeders for hospital beds and to some extent for the after-care of discharged patients. In spite of the vastly greater cost of hospital as compared with dispensary care, no definite preventive work is done in the dispensary. Development of dispensaries, in connection with a social service department, to the point of maximum efficiency, would be a great economic saving, for it would reduce the need for hospital beds.

Dr. McLean's suggestions for improvement in outpatient work apply especially to work with children. If possible, the dispensary should be connected with a hospital. A laboratory with well-trained bacteriologist and serologist is essential; so are certain comforts for patients An x-ray department is almost a necessity. The records should be kept, filed, and cross-indexed as in the well-conducted general hospital. The staff should consist of an admitting physician and the chief of clinic and his assistants, among whom should be numbered a laryngologist and otologist. The admitting physician Dr. McLean regards as an extremely important official. "Allowing sick children to sit side by side in the waiting room of an outpatient service is neither sane nor necessary"; for a patient may thus contract a disease worse than the one with which he came. "There is no good preaching preventive medicine if even the prospective patients are subjected to these abuses." No man should be accepted on the staff who will not promise to remain at least a year. The director of the clinic should have a position in the hospital wards.

Serious thought should be given to the problem of congestion. More physicians and longer admitting hours would make it possible to care for more patients. A better social service department would render it unnecessary to see patients so frequently. Pay dispensaries for those who are able to pay but unable to meet the charges of specialists would reduce the amount of illness and hence of dispensary congestion.



Demand for Hospital-Trained Nursery Maids

To the Editor of THE MODERN HOSPITAL:

Are any of the hospitals that you know of giving training to nursery maids, and if so, what; and are the trained maids in demand in the community, and at what wages?

A WESTERN SUPERINTENDENT.

A number of hospitals are training nursery maids and are enthusiastic about the work. Michael Reese Hospital, Chicago, has maintained such a school for the past eight years, and Miss Margaret McKenzie, superintendent of the training school is unable to meet the demand. At Michael Reese the course is one year, six months in the maternity department, and six months in the children's hospital. The school is able to care for twenty pupils. The requirements are good moral character, pleasing personality, and a grammar school education. Pupils are given a certificate on completion of the course, and the school is unable to meet the demands for nurse-maids at $10 to $15 per week. There is a regular course of study, simple but thorough, practical rather than theoretical, lectures and demonstrations by the graduate head nurses in the two departments, and supplementary lectures by the medical staff members of the two services.

The Best Window Shades

To the Editor of THE MODERN HOSPITAL:

I have looked through the literature, especially through back numbers of THE MODERN HOSPITAL, to find a substitute for the old-style roller blind, but without success. Can you tell me just what is the approved form of window shade at the present time?

Then, again, where the windows are double-hung and there is a transom opening inward, it is impossible to fit a blind that will cover window and transom.

AN ARCHITECT.

Nothing has been found as a satisfactory substitute for the so-called Holland window shade, which differs from the older form of semi-opaque shade only in that it can be washed or cleaned and is not quite so opaque as the older and stiffer cloths.

The great trouble is that hospitals do not clean their window shades, no matter what they use, and what we call curtains have almost no purpose except ornament. They do not shut out the light unless they are of heavy goods, and in any case they are dirt-catchers, rendered more offensive during the past decade, or since we have been accustomed to putting our radiators under our windows. The placing of the radiator there has the effect of bombarding the area above the radiator with dirt particles as a result of the heat rising from the radiator and taking with it these dust particles.

On the whole, we are quite sure that the so-called Holland shade is the best solution of the problem up to this time, and you will find it quite satisfactory if you will have your shades taken down about once a month, laid

across a table and washed off, while still stretched, with a soft sponge, tepid water, and a very little green soap, then rinsed with cold water without soap. The shade can then be laid straight on a clean floor, or upon a sheet laid on the floor, until it is thoroughly dry. This is not so complicated a piece of technic as might be imagined, because the shade dries very quickly and a considerable number can be laid, one on top of another.

To solve the transom problem, it is best to hang the transom shade separately; fasten the roller at the bottom of the transom and work the cord through a pulley that has a catch mechanism in it, from the top.

Official Uniform for Nurses

To the Editor of THE MODERN HOSPITAL:

I have read somewhere that a nurses' uniform made by a certain manufacturer has been adopted as the official uniform for nurses in the government service. If this is correct, will you kindly give me the name and address of this manufacturer; or, if not correct, please recommend some firm making good uniforms for nurses.

SUPT. OF NURSES IN A WESTERN HOSPITAL.

It is not true that the government has designated any particular manufacturer as an official maker of nurses' uniforms, and it is not likely that any such step will be taken. All of the firms advertising nurses' uniforms in THE MODERN HOSPITAL are reliable, and we suggest that you write some or all of them regarding your requirements.

Standard Normal Salt Solution

To the Editor of THE MODERN HOSPITAL:

Will you kindly tell us how the so-called "normal salt solution" that the surgeons use is made, and how it is kept ready for use? A SUPERINTENDENT.

The pharmacist makes up the concentrated Locke or Ringer solution, both of which are standard. These solutions are then sent to the operating department, where they are diluted with distilled water, according to the directions which your pharmacist will give you. The solutions are put into 1-liter or 2-liter Florence flasks capped with a pledget of cotton tied over with sterile gauze; the flasks are then placed in the sterilizer and given the three-day fractional sterilization. In Michael Reese Hospital, Chicago, the solutions are kept at 120 F. in a continuous bath in an automatically controlled solution sterilizer heated by gas, and are always ready for instant use. Sometimes the surgeons require the use of these solutions in the homes of patients, as, for instance, in a case of eclampsia. One or two flasks are taken out of the bath, wrapped in a heated blanket, and the hospital sends an intern and a surgical nurse with the "normal salt solution box" in an ambulance or automobile to the scene of the emergency. Care is taken to train all surgical interns and nurses in the use of the apparatus, whether the intravenous, subcutaneous, or abdominal method is desired. This is one of the services to the community which this particular hospital prides itself on giving, and for which there is no charge.

Miss Catherine Kent, of Jackson, was chosen president of the Mississippi Association of Graduate Nurses at a meeting of the association held in Vicksburg early in November. Other officers for the ensuing year are: first vice-president, Miss Mary Trigg, of Greenville; secretary, Mrs. Jennie Quinn Cameron, of Hattiesburg; treasurer, Miss Jane P. Cox, of Natchez.

LETTERS TO THE EDITOR

More Knowledge Instead of More Sanatoriums

To the Editor of THE MODERN HOSPITAL:

It is a wretched state of affairs that I have to report. I find that my greatest interest and all my enthusiasm centers upon efforts to avoid the necessity for hospitals for tuberculosis patients. I am not at all in sympathy with the present scheme of antituberculosis work. It seems to me to begin at the wrong end. I can only see my point of view and so cannot have much patience with what I consider unwise. To let a case of tuberculosis go on until it needs hospital treatment is where we fall down in our methods. What we should do is to keep after the children by periodical examinations and see to it that tuberculosis never develops. "Fewer hospitals every year, no more sanatoriums!" would be my war-cry instead of more.

Every year should see a tuberculosis hospital closed instead of opened. Instead of every week reporting new societies and new buildings and new appropriations, I should like to read: "Thanks to the careful survey and care of our children, we find that the need for beds for tuberculosis patients is steadily decreasing."

I feel that we are on the wrong track; that we are picking up and palliating but not preventing; that we are ignorant, have no idea of what this disease is that we are combating with so much complacency and self-congratulation; and that before we can know anything really about it we must first get down and study and find out what are facts and what are fancies. There is any amount of dogma and doctrine that needs discarding and any amount of laboratory work that must be done before we know anything adequate to the problem. To attempt the solution of the tuberculosis problem in the present complete state of our ignorance is like the metaphysical work of the dark ages. We are all metaphysicians in this work today, and we need science first of all to take us out of this mess we are in and show us the way. We do not even know what place the tubercle bacillus occupies in the world of acid-fast bacilli, nor do we know its life history. We only know one stage of its existence. We are thoroughly uninformed as to the source of the extremely wide-spread infection of children—so wide-spread that even Theobald Smith speaks of it as "ubiquitous." Why is this infection ubiquitous? Where is it? At what age is it acquired? Instead of going smugly on as we are doing, patting ourselves all over the back and thinking we are really attacking the tuberculosis problem, we should come out in the open and say frankly that we are going too much on surmise.

Will not some man give us the money to study tuberculosis as it should be studied? Why does not the Chicago University make a research work? What we need to do is to study. We need more knowledge and fewer hospitals—more study and less nursing. Let us replace milk and eggs by scientific facts and do away with the necessity of caring for the results of our ignorance. Tuberculous processes should never be permitted to develop into manifest cases. We need a thorough overhauling and reconstruction of our tuberculosis theories if we are ever to get our heads above this sea of fatuous self-satisfaction in which we are submerged. If you could just get someone in the research department of the university to study these problems, and show us how to reduce the number of cases! This has never been done. It would be a great thing for Chicago to show the way to the whole world for all times. The real preventive of tuberculosis consists in the acqui-

sition of more knowledge—not in palliation—which is what we are doing today.

MARY E. LAPHAM, M. D.,
Highlands Camp Sanatorium, Highlands, N. C.

A Hospital Service Flag

To the Editor of THE MODERN HOSPITAL:

I thought you might be interested in the inclosed photograph. Our service flag, which I believe is the first one on any New York hospital, contains one hundred and ninety stars, these representing those who have left the

The service flag of the Presbyterian Hospital in the City of New York.

hospital service for military duty. The photograph is not a very good one, but is the best we can do from any available point in our vicinity.

CHARLES H. YOUNG,
Superintendent Presbyterian Hospital in the City of New York.

Move to Promote the Training of Nose and Throat Specialists

To the Editor of THE MODERN HOSPITAL:

As you are aware, a committee representing all the associations of otolaryngologists upon this continent has been at work for some years in the endeavor to standardize the training of those who desire to enter upon this specialty.

In contradistinction to the ophthalmologists, the committee is not proposing an examination for license by a federal board, but favors the obtaining of a special degree, D. Sc. (otolaryngology), from the post-graduate department of leading universities, upon examination after the completion of a definite course of training; (1) as an intern of a standard hospital in medicine or surgery, or both, or a term of years in practice; and (2) as intern in the otolaryngological department of a standard hospital, for eighteen months; and (3) the attendance on a short course in such subjects as special anatomy, embryology and histology, physiology, pathology and bacteriology, neurology, and physics, in the post-graduate department of the university conferring the degree.

In order to be in a position to lay the scheme before the post-graduate boards of study of the universities for their consideration, the committee must be informed what facilities are afforded by the hospitals of the continent for the reception of special interns.

1. The total number of beds in each hospital.
2. The number of these set apart for otolaryngological cases.
3. Whether these are under a departmental head.
4. Whether there is an intern set apart for this department.
5. The regulations regarding the intern service. Is there (a) a rotation service, or (b) a lengthy period confined to one department, or (c) a graduated term of service, juniors, seniors, etc.

It hardly needs to be pointed out that should such a scheme as outlined above be brought into operation and be supported by the leading special and general hospitals, such hospitals would be insured a constant succession of satisfactory material out of which to man the department of otolaryngology with responsible and earnest interns.

Condition 1 laid down above would make it reasonably certain that the interns in question would be possessed of a sound basic training and with these, entrance upon the special training of otolaryngology would be in no sense an experiment, but a deliberate investment of time, determined upon after mature thought.

Moreover, where a rotation system of internship is in operation, the scheme outlined above would not interfere. The rotating intern would still take on the otolaryngological service for six weeks or two months, acting in the capacity of junior on the service, and receiving much help from the chief intern.

Information as to the number of hospitals which have a regular department of otolaryngology is difficult to obtain. Any general hospital of 250 beds should have at least 15 beds set apart for such cases, and these would occupy the full time of a houseman, provided he worked also in the out-patient service.

Any information which your readers can supply will greatly assist and will be appreciated.

On behalf of the committee,

D. J. GIBB WISHART, Chairman,
47 Grosvenor street, Toronto, Can.

Economical Features of a California Sanatorium

To the Editor of THE MODERN HOSPITAL:

We are mailing you under separate cover a copy of our last annual report, which will give you a fair idea of our work, and also offers a number of details as to the methods of administration, etc.

It is interesting to note that the cost per patient per week has been kept at such a low figure in spite of the facts that most of our patients occupy individual rooms in separate cottages, and that the cost includes all medical supplies, drugs, personal laundry, and everything else pertaining to the care, living, and treatment. This cost includes also the value of vegetables raised in the garden by patients, which are charged to the provision account at market rates. There are several factors that may have helped to bring this about. Owing to the climate, it is not necessary to heat the patients' cottages at all, and the

heating of the main buildings is not required except for a small portion of the year. Consequently, our fuel bill alone is very much less than that of a corresponding institution in the East or in other colder localities, such as Minnesota, for example. Using oil for fuel saves a great deal of labor, handling coal, taking out ashes, etc. Situated within the city limits, we enjoy the advantages of city water, sewerage system, electric light and power, gas and transportation facilities not possible in the case of institutions situated in more remote places. A considerable item is saved in the way of wages by having the patients wait upon themselves at the table, so that only one pantry girl is required during the meals to see that the various serving dishes are kept replenished.

We do pay considerable attention to the question of occupation for patients, especially as a means of training and trying them out before they resume a life of activity after discharge. A vegetable garden and outdoor workshops furnish ample facilities in this direction. Patients are also required to make their beds and take care of their cottages in all cases in which the physical condition indicates. While the economic side of the patients' occupation has never been emphasized very much, at the same time it does help to keep down expenses somewhat in certain directions.

WALTER C. KLOTZ, M. D.,
Resident Physician, Barlow Sanatorium Association, Los Angeles, Cal.

The Family as the Unit of Public Health Work—A Correction

To the Editor of THE MODERN HOSPITAL:

I much regret an error which appears in my paper, "The Family as the Unit of Public Health Work," published in the October number of THE MODERN HOSPITAL, page 247. A sentence occurring in the fourth paragraph, on page 249, reads as printed, "All the home visiting is done not only by a separate staff of public nurses, but by the public health nurses already visiting in that particular locality." The word "only" is a typographical error, conveying an entirely different meaning and thereby destroying an important point which I wish to make.

MARY BEARD,
Director of the Instructive District Association of Boston.

Sterilization of Food Debris in Isolation Hospital

To the Editor of THE MODERN HOSPITAL:

In connection with a very up-to-date isolation hospital now under construction, estimates were asked of a number of firms specializing in sterilizing apparatus for a specially constructed sterilizer, which was to be used in a somewhat new way, to insure the sterilization not only of the dishes, but of the food debris, before the debris was thrown into the sewer, in this manner insuring against any possible spread of contagion through this source. A very well-known sterilizer manufacturing concern wrote to me, as a suggestion: "If you turn live steam on dirty dishes you will cook the debris so that you will be unable to wash it off. We think it would be a great deal better to wash the dishes first and sterilize them afterwards."

I write this merely to show how dangerous it is to depend, as is sometimes done, on the experience and scientific knowledge of the manufacturer. In the hospital in question, which is intended really to isolate contagion, the dishes from the patients will be brought to a room for the purpose, and put into a sterilizer of special construction—tray, napkins and debris—just as it leaves the patient. After sterilizing, the sterilizer is opened from another room—a clean room—on the opposite side of the partition in which this sterilizer is located, and the trays of dishes are removed, scraped and washed. Contagion from the refuse and handling of it and the dishes is thus reduced to practically zero.

V. A. MATTESON, Architect,
La Salle, Ill.

Plea for the No-Staff Hospital

To DR. JOHN A. HORNSBY AND ASSOCIATES in the Standardization of Hospitals Series of Articles:

I have your letter of the 1st instant. I have read the article on "Hospital Standardization" in the August number of THE MODERN HOSPITAL. This interested me very much. You ask whether I think there is any reason to make any change in the markings of such hospitals as ours when compared with the teaching hospitals. I believe so. At the same time I am very free to say that this is a question that I have not hitherto seriously considered, and what I have to say, therefore, is largely said with a view of presenting new angles for discussion.

To begin with: I do not agree with the statement made in the heading of your July article, in which you characterize the teaching hospitals as "the most important of all institutions"—I suppose meaning institutions of the hospital type. This conclusion in my belief is entirely foreign to the consideration of the subject as I see it. I take it the desire is to segregate the various types, reaching some general plan of estimating the degree of perfection reached by hospitals in each type. That I think does not call for a comparison of the relative advantages of the various types either to the community at large, the patient, or the physician. As, however, you have made the statement, I want to ask your indulgence to say a few words on the subject.

It is admitted that the primary object of a hospital is the care of the patient. My understanding is that the primary object of the teaching hospital is to provide material for the practical teaching of the student body. That being so, I believe it is difficult to get any other atmosphere in a teaching hospital, and the care of the patient quite naturally, though unintentionally perhaps, is relegated to a condition of secondary importance. I may be wrong, but that is the impression that has been left in my mind.

In the next place, teaching hospitals are largely devoted, as I understand it, to the very commendable object of caring for the indigent and the semi-indigent, using that material for the practical teaching of the student. This is, no doubt, very important, and yet it seems the care of that part of the body politic—and they must relatively be much the larger number—who are self-supporting in sickness as well as in health, should not be relegated to a secondary place.

Again, perhaps not 10 percent of the medical profession have teaching hospital affiliation, and certainly the 90 percent who are outside the teaching hospital, with the patients they care for and the hospitals they attend, do not deserve at the hands of hospital experts a place of secondary importance.

The question to be considered, therefore, as I understand it, and the only question, is the division of hospitals into various types, without any reference whatever to the comparative importance of the various types. I am not stating this in a controversial spirit, but with the idea that we shall the quicker reach some agreement, in seeking the establishment of some certain percentages by which we

can estimate and standardize hospitals, if we get a common viewpoint.

I believe there are certain essentials that are common to all hospitals; that is, certain basic things without which a hospital cannot effectively serve its primary purpose of caring for the sick, and that a hospital reaches its full effectiveness as it becomes perfect in these basic things. These are:

1. Nursing—whether graduate or undergraduate.
2. Laboratories—all branches.
3. X-ray departments.
4. Dietetic department.
5. Pharmacy.
6. Records and accounting.
7. Architecture, including all primary installation.
8. Equipment—medical, surgical, and physical.
9. Administration.

It will be noticed that I do not include the Dispensary, Out-patient and Social Service Department. In my view this is really a by-product of the hospital, and according to my understanding of a hospital does not cease to be any the less an effective agent for the proper treatment of hospital cases—the primary purpose for which hospitals were instituted—because it lacks an outside service department. Neither have I figured a "hospital staff" as a basic part of a hospital organization. If it were otherwise, it would go rather hard with the 80 percent or 90 percent of physicians who are not on any hospital staff and yet who must effectively care in hospitals for cases that develop in their practice. Of course, it goes without saying that the physician in general practice, if he is competent to handle office and residence work—and if he is not he should be barred from doing any medical work at all—should be given an opportunity of effectively following up his hospital cases without interference from any source.

May I be permitted to say in this connection that, with the best intention in the world, it is almost impossible for the staff hospital to give a non-staff physician the service and protection he should receive? The staff members quite naturally are the dominant members in a staff hospital. The officers and employees are consciously or unconsciously affected thereby. The patients of non-staff physicians are in an atmosphere that, if not actually hostile to their physicians, is so extremely favorable to the staff physicians that patients cannot help but be influenced. Admitting this condition, I claim that a "medical staff" should not be regarded as a basic part of a hospital. This hospital, for example, is without a visiting staff and should not be asked to accept a secondary rating on that account.

Quite naturally, then, percentages affecting these two departments—Staff Service and Out-Patient Department—must come out of the reckoning so far as this type of hospital is concerned. It would seem that the best way to approach the subject is first to divide hospitals into various types, and each type then into various classes, depending on the quality of service. I would suggest the following types, the order in which they appear being without any reference whatever to their relative importance:

Type 1. Teaching hospital. I have no criticism to offer as to the departmental division of percentages your committee has reached.

Type 2. Institutional hospitals. This may include state, county, and municipal hospitals where no pay patients are received. It may also include industrial hospitals, railroad hospitals, etc., where no pay patients are received. I assume the same classification would answer as in Type 1.

Type 3. Religious, charitable, and semicharitable hospitals. It might include also hospitals organized on the membership plan. These are all staff hospitals. There is this distinction, however, that pay patients under the care of non-staff physicians are received. This type will demand a different division of percentages, at least in so far as that part of the work is concerned relating to pay patients, as in respect to these there must be an elimination of staff percentages.

Type 4. This is represented by such institutions as ours, where there is no visiting staff and where the patients of all reputable medical men are received. The only point to be considered in estimating the degree of hospital effectiveness reached is the kind of service offered to the visiting physician and surgeon—the extent and character of the facilities given him for the proper care of his patient in the basic hospital essentials I have already mentioned. I would suggest for discussion in this type the following percentage allowances:

1. House staff and nursing staff (graduate or training school)	20%
2. Laboratories	10%
3. X-ray	10%
4. Dietetic	10%
5. Pharmacy	5%
6. Accounting	5%
7. Architecture	15%
8. Equipment	15%
9. Administration	10%

There is another element which is by no means negligible, but which I have not inserted in these percentages, and that is the atmosphere that can be created in such type of hospital of mutual help and mutual development for physicians who are using the hospital. This is done by the creation of clinical societies for the presentation of cases and the discussion of medical questions. If this is to be considered as a departmental division because it ultimately helps the patient in the improvement of the medical service, then I would suggest a rating of 5 percent and a reduction of Accounting and Pharmacy divisions to 25 percent each.

I might say that in approaching the question of operating this type of hospital we have endeavored to give due importance to the competitive angle, that is, the developing of the hospital by furnishing service that is more attractive to the patient and the physician than can be secured elsewhere. This quite naturally counts for greater efficiency. In fact, there is no surer test of measuring standards of efficiency than that service is successful in a competitive way. As a general proposition it may be stated that the hospital that is sought after by the sick and injured in any community and by the physicians in any community, and that is enlarging and expanding because of increased patronage, requires no other appraisement to mark it as a Class A hospital in that community. I realize, of course, that such a situation can apply only where patients pay for their accommodations and cannot apply to charitable or semicharitable or teaching hospitals. The element of competitive efficiency is necessarily lacking in such institutions.

Type 5. This is the private hospital, limited to the patients of a single physician or a group of physicians.

Having divided hospitals into various kinds or types, we come now to a division of the types themselves, depending on the quality of the service. This division, I assume, would be an alphabetical division. I do not know what your committee contemplates in this direction—whether is intends to fix various classes, like Class A, B, C, D, etc., with the requirement that each class must not

go below a certain minimum in any of the divisions. For example, Class A must show an efficiency of 90 percent and over in all divisions; Class B, an efficiency under 90 percent but 80 percent or over; Class C, an efficiency under 80 percent but 70 percent or over, and so on. There is, then, a numerical division representing types and an alphabetical division representing quality.

If there is a quality division, on the basis outlined above, it might be necessary to divide Type 1, that is the teaching hospital, if there are teaching hospitals without outside service sections. It certainly would not be equitable to deprive a teaching hospital of the highest rating so far as the primary purpose of a hospital is concerned if such a hospital showed over 90 percent efficiency in nine departments, and yet did not have an outside service department. If this should create another type, of course the rating would necessarily be rearranged. Perhaps, however, it is intended to get the total percentage of efficiency in the various departmental subdivisions and fix the rating on this basis, which might result in the hospital getting a fairly high rating because of great efficiency in some departments while there may be defective service in other departments.

I believe it will be found very difficult in actual practice to formulate a plan of standardization that will convey more than a general idea of the relative standing of hospitals, but I suppose the commitee has in mind only some general classification and standardization.

I have gone perhaps rather far afield in my answer to the question you propounded, because of certain misapprehensions that may exist on the subject of the type of hospital we operate and because I feel that in any standardization that could fairly take in a hospital of this type it would be well that you and those associated with you in this work should see the subject from our viewpoint. We have in many ways gone outside the accepted hospital field in an endeavor to take care of that part of the population who are able to provide for themselves—and who wish to provide for themselves—all the reasonable facilities and even comforts that can be purchased through periods of sickness and of injury. We desired in this connection, too, to give those members of the medical profession—the large majority of the profession—who were not on hospital staffs, a fully equipped hospital where they could effectively care for the severer cases that developed in their practice with as little interference with the patients and with the treatment as would follow if such facilities could be provided at patients' own homes, consistent, of course, with such supervisory control, professional and otherwise, as will insure the maximum of protection to the three parties so vitally interested, viz., the patient, the physician, and the institution.

I want to say in conclusion that I have replied at such length because of a realization that you and your committee desire a full and free discussion of the subject and that thereby we may all be stimulated to reach a greater degree of efficiency.

JOHN J. O'CONNOR.
Superintendent, St. Francis Hospital.

At a Red Cross Examination

"How would you prepare a sitz bath?"

"Fill the tub with warm water, and as much sitz as the doctor recommends, the amount of sitz to depend on size of patient."

The foregoing brings to mind the great moment in the life of Archimedes. The amount of sitz gave him the key to a perplexing problem.—B. L. T., in *Chicago Tribune*.

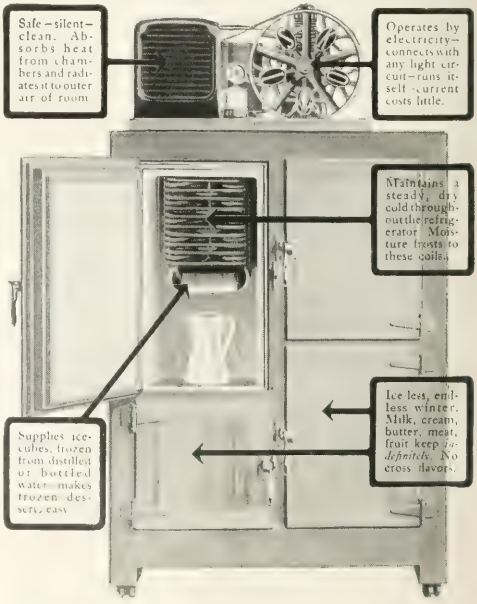
NEW INSTRUMENTS AND EQUIPMENT

VINCENZ MUELLER, Technical Editor.
GEO. W. WALLERICH, Associate Editor.

Please address items of news and inquiries regarding New Instruments and Appliances to the editor of this department, 327 Southeast avenue, Oak Park, Illinois.

Isko Refrigerating Unit

Refrigeration has long been a vexing problem in hospital management. The great drawback to the ideal service arrangement—an individual refrigerator for each ward or group of wards, private rooms, diet kitchen, pathological laboratory, etc.—has meant the necessary visits of the iceman with his dripping, ill-protected burden. But the most serious deficiency of ice-cooling has been the inade-


Safe—silent—clean. Absorbs heat from chambers and radiates it to outer air of room
Operates by electricity—connects with any light circuit—runs itself—current costs little.
Maintains a steady, dry cold throughout the refrigerator. Moisture frosts to these coils.
Ice less, endless winter. Milk, cream, butter, meat, fruit keep indefinitely. No cross flavors.
Supplies ice-cubes, frozen from distilled or bottled water—makes frozen desserts easy.

Isko refrigerating unit attached to an ordinary refrigerator.

quate and fluctuating character of the cooling itself—cold enough to safeguard the perishable foods necessary for patients for a few hours after the ice supply has been replenished, but mounting nearer and nearer each hour to the danger line where fermentation and decay set in and the foods become unfit for use.

The safe and economical range of temperatures for keeping foods is well known to every hospital director and the physicians of his staff. But it is only recently that invention and research have supplied an answer to the

problem of providing individual ward refrigerators that hold the safe, low range of temperatures which science now demands, yet bar out the iceman and his doubtful freight forever.

Isko is an automatic refrigerating unit which can be installed in almost any icebox. It can be carried in by two men, can be put in place in a short time, and connected with the nearest electric light socket in twenty seconds. Thereafter Isko requires no attention. Its action is controlled by a thermostat so sensitive that a rise of 2 or 3 degrees inside the refrigerator starts its operation. The thermostat is adjusted for the standard best temperatures for keeping foods. From 44 to 48 F. is the safe and economical range—cold enough to render inactive the bacteria of decay, which exists in all perishable foods. In addition to its food-protecting function, Isko freezes a daily supply of pure ice-cubes for cooling water. In the designing of hospitals, therefore, Isko eliminates the problem of providing icing facilities by entirely eliminating the iceman. It is a piece of machinery almost noiseless, is self-lubricating, and requires little more care to keep it in order than an electric fan.

The unit fits any refrigerator, old or new. It has a cooling capacity equal to 200 pounds of ice melting daily. Removing of a panel from the top of the refrigerator above the ice-chamber is the only change necessary to install it. No plumbing is required.

Hotpoint Hedlite Heater

The electric heater illustrated here has recently been placed on the market and is known as the "Hotpoint Hedlite Heater." It is built on the principle of a portable lamp and commends itself for use in heating bathrooms and other small rooms, under the table, at the bedside, etc.

This heater is substantially built of pressed steel, with highly polished nickel finish. The reflector is copper-

Hotpoint Hedlite heater.

plated and polished. It is adjustable, being fastened to the upright by a hinged joint, thus permitting the heat rays to be directed parallel to the floor or diagonally upward.

An exclusive feature of the heater, and one that makes it absolutely safe to use, is the manner in which the base is weighted. The treatment here is such that, should the heater be accidentally upset, it will immediately right itself, with heating element point upward. This eliminates any danger of fire, should the heater be upset while current is turned on.

Added to its safety is the fact that it provides pure, unadulterated warmth, which is conducive to good health, as it does not vitiate the air as do fuel-burning heaters. It is exceptionally convenient, operating from any electric wall or lamp socket, is light in weight, and, with handle at the back of reflector, the heater may easily be carried from room to room.

Too much cannot be said in favor of the use of such a heater in the home, sanatorium, hospital, office, etc., during damp, chilly weather, before permanent heating installations are in use, for the cold corner, at the bedside, or the invalid's chair.

Fumigato—A Permanganate of Potash Substitute for Fumigation

It is generally agreed among men of experience in hospital work that formaldehyde gas is the only really effective method of fumigation, and previous to the present war permanganate of potash was the agent used for expelling this gas.

During the last two years, however, the cost of permanganate of potash was prohibitive for fumigation purposes; it is at present quoted at about $5.50 a pound, and, as one-half pound is necessary to expel enough gas to fumigate a room of 1,000 cubic feet of space, its use has practically been abandoned.

On account of this shortage of the proper materials, many institutions were compelled to fall back upon the older methods which they had previously abandoned, such as spraying formaldehyde solution with an atomizer, boiling formaldehyde over an alcohol flame, as well as the use of sulphur, etc., on the theory that these methods were at least better than no fumigation at all.

Several manufacturers have made an effort to produce a satisfactory substitute to take the place of permanganate of potash, with more or less success, but the Neale Chemical Company, of Cleveland, O., has put a good substitute on the market, under the trade name of "Fumigato." The manufacturers state that this preparation is not in itself a fumigant, but is an agent taking the place of potash used in the expelling of gas from formaldehyde, and that the contents of one box of "Fumigato," costing about 14 cents, will liberate every atom of gas in one pint of formaldehyde and do the work quickly and thoroughly.

Upon inquiry at several well-known hospitals that have been using this material for some time, we have been informed that it has proved very satisfactory, and as the compound is comparatively cheap, it seems well worth while for any institution to give it a thorough trial.

The Thoma-Levy Haemacytometer

It is gratifying to note that our American manufacturers of scientific apparatus are proving themselves equal to the occasion in producing appliances requiring the greatest precision in construction, to replace those formerly made abroad.

The situation as regards haemacytometers, for instance, has been a critical one during the past two years, because prior to that time practically no haemacytometers were made in this country. Several manufacturers have now become equipped for the production of haemacytometers.

One of the latest is that made by Levy, in which the principle of the Bürker haemacytometer is used. This firm has been known for many years for the excellence of their screens for the half-tone process, diffraction gratings, etc.

In the old type of Bürker chamber two ruled areas are provided on rectangular pieces of glass cemented on the main slide. These ruled rectangles were separated by a small moat to allow free passage of the diluted blood. On either side of these ruled rectangles two un-

ruled rectangular pieces of glass were cemented, which extended the entire width of the slide. These were exactly 0.1 mm. thicker than the ruled rectangles, so that when the cover glass rested on these the required depth of solution over the ruled area was attained.

In the Levy construction a rectangular depression is cut into the slide itself extending across the entire width. In the middle of this depression is permanently fixed a rectangular strip of glass, also extending entirely across the slide, and on this are the rulings. When the cover glass is placed in position on the slide itself the solution over the ruled areas is of the required depth. The Levy method of construction avoids the cemented cell and the attendant danger of its loosening by the drying out of the balsam cement, and the possibility of the loosening of the ruled counting surface is also greatly reduced by this construction. The parallel form of cell greatly facilitates cleaning as compared with the circular type and the method of ruling used in the manufacture of these chambers provides a line with absolutely clean-cut edges and of distinctly increased visibility when the chamber

Thoma-Levy haemacytometer.

is filled with solution for the count. This increase in visibility of the ruling greatly lessens the eye fatigue experienced in making repeated counts.

The Bürker type of counting chamber, of either the new or old construction, has a further advantage over the original Thoma construction, which consists of a circular ruled disc cemented on the slide in the center of a circular cell, also cemented on the slide, in that capillary attraction is used to fill the Bürker cell after the cover glass is in position. This method insures a much more uniform distribution of corpuscles over the entire field, and the effect of atmospheric pressure on the depth of the solution is materially lessened. These new Thoma-Levy counting chambers of the Bürker type are now supplied with the most used rulings, i. e., Thoma, Zappert, Turk, Neubauer, Fuchs-Rosenthal, etc. The Neubauer ruling is now recommended as the most satisfactory for modern technic.

I'd rather be a Could Be
If I couldn't be an Are,
For a Could Be is a May Be,
With a chance at touching Par;
I'd rather be a Has Been
Than a Might Have Been, by far,
For a Might Have Been has never been,
But a Has was once an Are.

—Ladies' Home Journal.

A TRAINING COURSE FOR OCCUPATIONAL EXPERTS

Demand for Trained Directors of Industrial Work in Hospitals Met by New College Course

BY ELIZABETH G. UPHAM, Director Art Department, Milwaukee-Downer College, Milwaukee, Wis.

Milwaukee-Downer College, Milwaukee, Wis., is one of the first institutions to recognize the new profession open to women of directing industrial work in hospitals. There is an increasing demand for such trained specialists, and a new and interesting field of social work is opening. Not only has the work a definite and therapeutic value in the medical program of institutions, but it has also the deeper social significance of adjusting the subnormal to economic life.

As thousands of wounded and disabled soldiers are turned back upon society, the warring countries are face to face with the problem in all its acuteness. Every disqualified soldier who can be trained into the industrial army and who becomes an independent wage-earner adds to the resources of the country, while every one who cannot increases the drain of dependents. Idleness and unproductiveness on the part of a large population, together with the multitude of ensuing social wrongs, undermines the vitality of a country and proves in reality a far greater liability than pensions or war debts. There is consequently a great demand in Europe and Canada for those trained to direct industrial work for the handicapped, who thereby not only facilitate the patient's recovery, but also make his convalescence a period of vocational training. On the mental, moral, and physical rehabilitation of convalescence depends the economic independence and the future welfare of thousands of citizens. If this country is to become seriously involved in the war, such training and such experts will be indispensable. It is as great a service to one's country to recognize the discards of war and rehabilitate them physically and industrially for life as to produce fighting men for the front. Each day the war is prolonged the stream of outgoing men is lessened and the current of incoming and incapacitated men is increased. Each day of war, therefore, increases the need for the work of rehabilitation and adjustment, and, in so far as the problem has been successfully met, just so fast will the nation rally from the burdens and depressions which inevitably follow war. It is a problem of reconstruction and civilization. In order that this country may be prepared to meet this possible crisis, Milwaukee-Downer College is offering in its curriculum those subjects which will best prepare the industrial directors for their great task. The course as outlined has an advantage over many other lines of preparedness, in that it is training which need not wait for the acute condition of war to make it necessary. The demand for occupational directors in the hospitals and sanatoriums of this country is already greater than the supply of those trained to meet it.

Milwaukee-Downer College has studied the kind of training which best prepares the student to become an industrial director of the handicapped. It is an intimate knowledge of the medical and social condition of the subnormal, together with technical proficiency. Experience has taught that the nurse and doctor are not qualified to direct this work. The medical aspect of the problem is skillfully handled by them, but they lack the long practice necessary to technical industries. They, therefore, cannot know the full possibility of every process. Moreover, they have not the economic background, the knowledge of competitive markets, and the efficiency of a real shop or fac-

tory, without which the patient may be cured but not adjusted to the conditions he must inevitably meet. On the other hand, the shop boss or expert cannot adequately meet the requirements. His is a limited point of view, failing to understand the close connection between the physical condition and the impaired capacity. However well his shop may be organized or however expert his technical skill, he will fail with the subnormal unless he has the social background, the intelligent sympathy of understanding, and the medical point of view which renders the work of great therapeutic value, instead of being worthless, if not positively harmful. It is because technical knowledge and the medical and social points of view must be equal in importance that the course of study at Milwaukee-Downer College is divided into two classes, the academic and the technical. In the academic are included the cultural subjects for a wide background, a thorough knowledge of economics and sociology, and a careful program of medical reading. The student must know the particular treatment of tuberculosis, its possibilities and limitations, must understand the mental points of view to be encountered in consumptives, and must adapt industries which not only are suitable and helpful in convalescing, such as work requiring deep breathing without being heavy, and free from dust and fumes, but which also will be commercially profitable for the patient to follow when recovered. Rheumatism, arthritis, heart trouble, neurasthenia, insanity, etc., are all different and require not only their special medical programs, but their special occupational treatment as well. This is a part of the medical background required of students. The technical courses include the study of the theory of design, applied and industrial arts, and training in special industries in factory or shop. The course in industrial arts has a unique feature especially adapted to students preparing for this profession. Not only does the student learn to teach a craft, but the various processes involved in hand work and the ways of presenting each process are studied in themselves. Thus it is known how to stimulate the brain through the hand, how to develop purely manual skill, and how to coordinate both hand and mind. It is this detailed study of occupation in close correlation with the pathological study of disability which prepares the student for the special field of directing industrial work for the handicapped.

THE JEWISH HOME FOR CHRONIC INVALIDS OF ST. LOUIS

Personal Care and Individualization the Strong Points of This Small Institution—Rest, Food, and Fresh Air Held of Cardinal Importance

BY ELIZABETH S. KAPLAN, Superintendent, and SELIG SIMON, M. D., Medical Director, Jewish Home for Chronic Invalids, Anglum, Mo.

The Jewish Home for Chronic Invalids cares for patients suffering from pulmonary tuberculosis in all stages. It is ideally located in St. Louis County, Missouri, about ten miles northwest of the city of St. Louis. An electric railway, with a twenty-minute schedule, runs within one-half mile of the institution, making it easily accessible for patients' relatives and friends.

The buildings are situated on a fifty-acre tract of gently sloping ground, and bounding it on all sides one sees the thrift of earnest, prosperous farmers, a fitting prospect for those city-driven cripples whose future looms brighter amid the freedom of the country. The group of buildings consists of the administration building, the Shoenberg Memorial, a permanent structure for moderately advanced and far advanced cases, and two frame structures for early cases.

The Shoenberg has accommodations for twenty-five patients; the "shacks" for eighteen each, making a total capacity of sixty. In the administration building are located the officers' quarters, the executive office, consulting rooms, examining room, laboratory, dining rooms, general kitchen, laundry, employees' quarters, sterilizing room, warehouse, store rooms, refrigerators, etc. The engine house is attached to the rear of the administration building. Each of the buildings for the care of the patients is equipped with every modern convenience approved along the latest advanced lines.

Our institution is small, and therein lies its strength. Patients come under the personal care of our medical staff, and the medical status of each patient is always known. Each patient is seen at least twice daily. It is our aim to cure our patients, not to build up statistics. All patients when admitted are put to bed, and no patient, no matter how apparently mild his infection, is permitted up for the first two weeks. In this way we can study our patients under ideal conditions.

The temperature, pulse, and respiration are taken rectally, with the thermometer in situ five full minutes. It is important that the temperature, pulse, and respiration be taken at definite stated times, for instance, as soon as the patient awakens, when the recuperative benefit of a refreshing sleep is at its maximum, and when abnormal changes in the temperature, pulse, and respiration, mean, with other findings, the onward progress of the disease; just at the noonday meal, when the energy requirements of the patient reach their maximum for the first half of the day; immediately following "rest hours," the time of day when tuberculous patients usually show their greatest departure from normal; and at "bedtime," or the end of the day.

These, then, are taken with the patient under ideal conditions, and if they and other observations continue within normal limits, we infer that such a patient, living under such ideal conditions, could continue normal indefinitely. We then pitch his energy requirements proportionate to his apparent improvement.

We value our treatment in the order of importance, as follows: rest, food, fresh air. We do not, for instance, ventilate a person's lungs with cold air below zero and freeze the patient. Every patient is different; some thrive on cold air, others freeze on it. Tuberculosis care spells individualization. There is a vast difference between fresh air and air that chills the body, keeps the patient awake, and defeats its very purpose. Further, whenever we have extremely severe weather for any extended period of time, we invariably have upper respiratory tract difficulties, and this adds another obstacle to our already heavy load.

All patients are "strapped" over any area of activity, and the adhesive is reapplied every ten to twelve days. At times the improvement is truly marvelous, and can be explained only on the basis of limiting the involved area's expansion. All hemorrhages, when capable of localization, are likewise "strapped" in addition to usual routine measures.

Patients cough into gauze saturated with an antiseptic capable of inhibiting bacterial growth. Every patient receives a supply of "gargle mixture" each day for use two or more times. If too weak to gargle, it is sprayed over the pharynx and mouth. This minimizes throat affections.

Once every week the ambulant patients hear a talk on tuberculosis, and their knowledge of the disease constitutes a valuable part of the treatment. The nursing staff is

specially instructed in the intelligent and careful handling of each patient, and thus much irritation and complaint is avoided on all sides. When possible, the patients are offered such suitable positions as can be found on the premises, and in this way an opportunity is given to weigh their strength and prepare them for the harder tasks of life under less favorable surroundings.

An auxiliary board consisting of many prominent women of the city is actively engaged in looking after the welfare of the patients, procuring all sorts of amusements for them, such as weekly moving picture shows, concerts, outdoor and indoor games, reading matter, etc. Each building has a victrola with a good selection of records. Religious services are held weekly, being conducted by prominent Jewish rabbis and their choirs, and are greatly enjoyed by patients of all creeds.

A follow-up committee looks after the welfare of the patients after they leave the institution and helps them to find suitable quarters and employment.

SOME GUIDING PRINCIPLES OF INSTITUTIONAL LIFE

The Official Creed of the Kankakee State Hospital

A copy of the following "creed" is furnished to each employee of the Kankakee State Hospital before he or she goes on duty. It contains so many good suggestions that we reproduce it here for the benefit of other institutions:

OUR INSTITUTION CREED

When you became an employee of the *Kankakee State Hospital* you became a member of our official family. We feel that our family is *respectable, loyal, and efficient*, and we trust that you will be likewise. We consider you as such in every way unless you are proven otherwise. We have confidence in you and expect that you will be worthy.

The management of this institution will be *fair* to you, therefore be fair to it.

Our institution is like a great machine, made up of many parts. We are each of us one of the parts. Just as a machine is not apt to run smoothly when any of its parts are out of commission, just so our institution's efficiency is apt to suffer when any of its employees fall below the *proper standard*.

We believe that the best guide for the proper performance of our duty is our *conscience*. An employee whose conscience cannot be appealed to is not worth having.

Our positions constitute a *real trust* imposed by the people of the state, and we should prove by the quality of our service that we are *worthy of such trust*.

We should not do, either within or without the institution, anything which may *cast a reflection* upon the good name of our official family. The misconduct, carelessness, and mistakes of any one of us are apt to reflect unfavorably on all.

We strictly believe in *temperance*. We believe that drunkenness on the part of an employee at any time or any place is a serious offense and will not be tolerated under any circumstances. A drunken man is irresponsible and untrustworthy.

Our patients are the unfortunate brothers and sisters, husbands and wives, sons and daughters of our fellow citizens of Illinois and are just as dear to their kin as our own are to each of us. Therefore, *never mistreat* a patient either by word or deed. Unkind words often hurt more than blows. It is just as easy to use kindly words as unkindly ones. To our unfortunate charges kind words mean a great deal. There can be nothing more wicked than deliberately adding more pain to the life of any one who is helpless and has already sufficient sorrows. *Treat them as you would like to be treated yourself under like conditions.*

We are entrusted with the *taxpayers' money* and we have no right to waste any part of it. The most careful *economy*, consistent with *efficiency*, must be observed in every department. If anything, we should watch over the property of the state even more carefully than we would over our own.

There are many ways in which we can assist in saving money. Hundreds of dollars' worth of wearing apparel, furniture, and other things too numerous to mention are destroyed each year by patients, which might have been prevented by the watchful care of the employee. All departments, but especially our mechanical divisions, should be in every way careful that no new material is used when old material might do as well.

Let us be fair to our official superiors and to our fellow employees. *Do not be a "knocker," be a "booster."* Whenever we "knock" the institution that furnishes us our bread and butter we "knock" ourselves because we are part of that institution.

Let us *speak kindly* of all. Our institution is not big enough to hold the slanderer or the gossiper. Whoever tries by malicious means to injure another will find no place here. It is expected, however, and demanded that all matters of importance reflecting upon the good of the service and substantiated by proper proof be reported to the authorities.

The managing officer of this institution is your *friend*, but is not willing to purchase the friendship of any one by being a *"good fellow,"* if by so doing he has to neglect his own duty in the protection of the interests of the state. The only *"pull"* that holds good is *faithful and efficient service.*

When you play, play hard. When you work, don't play at all. There are hours set aside for both.

Honesty is always the best policy. We have no more right to unlawfully take things from the state than from a private individual. In case of distress or need in the family, appeal to the managing officer and he may possibly find means of assistance. Do not sacrifice *self-respect* for the sake of ill-gotten gains.

Proper discipline is essential in order to produce good results. We must be obedient to the requests of our official superiors. We must be like soldiers in carrying out orders. When we think injustice has been done we have the right to appeal, but we should appeal only after obeying.

In an institution of this kind *cleanliness* is surely next to *godliness. Nothing is clean enough that can be made cleaner.* We cannot tolerate, either inside or outside of wards and buildings, anything which is not sanitary. *Uncleanliness means disease* and we must prevent disease.

If we observe all these suggestions *we will get along nicely* and give satisfaction to the service. We then will be good citizens, as well as good employees, and a credit to our state. Sincerely yours,

EUGENE COHN, M. D., Managing Officer,
Kankakee State Hospital, Kankakee, Ill.
September 5, 1917.

NOTE.—Heads of departments must furnish a copy of "Our Institution Creed" to every new employee before he or she goes on duty.

HOSPITAL STANDARDIZATION IN CHINA

Special Problems of Mission Hospitals—Efforts Toward Standardization

The problem of the standardization of mission hospitals is discussed in a recent number of the *China Medical Journal* by Dr. Henry S. Houghton and also editorially by the journal itself.

Dr. Houghton remarks that the average medical missionary comes to China with sound professional equipment, but with small realization of the many delicate and complex administrative details which will be demanded of him. At home he had no responsibility for the hospital mechanism, and consequently he has acquired no training in its control. In China he is at once confronted with the problem of the organization of the hospital staff, the training of assistants and nurses, bookkeeping, the registration of patients, the assembling of records, the ordering of diets, and the kitchen, good housekeeping, etc. In the past it has been a common procedure to put the responsibility of

planning the building and equipment of a new hospital and determining its scope on a missionary physician who has just completed his period of language study. Authoritative standards would for these various reasons have a peculiar value in the missionary field.

In this connection the *China Medical Journal* in its editorial pages refers to the series of papers on standardization now appearing in THE MODERN HOSPITAL and to the other efforts now being made in the same direction, remarking, however, that "circumstances in the foreign field are so different that, speaking generally, any home system of standardization must be accepted as an ideal toward which to move, rather than the goal of possible accomplishment within a short time." A scheme of standardization worked out by the medical committee of the Eastern Asia Conference allots 25 points each to staff, physical equipment, house management, and evangelistic efficiency. In detail the scheme is as follows:

I. Staff, 25 percent.	Percent
1. 1 foreign physician for every 60 patients	4.5
2. 1 foreign nurse for every 60 patients	4.5
3. 1 native graduate physician for every 60 patients	4.5
4. 1 native graduate nurse for every 60 patients	4.5
5. 8 student nurses, 4 orderlies, and sufficient servants	4.5
6. Adequate provision for furlough and superintendence during the summer months	2.5
	25.0

II. Physical Equipment, 25 percent.	
1. 500 cubic feet of air space for each patient. Ceilings not less than 11 feet high. Windows not less than 3 by 6 feet and found on at least two sides of all rooms larger than 200 square feet. Openings for ventilation on one other side.	2.0
2. Floors polished or so finished as to be readily cleaned and giving no cracks or corners for lodgment of dirt. Walls and finishing woodwork devoid of ledges and other places for the lodgment of dust	2.0
3. Iron beds for patients. Bedding furnished for each patient, adequate and cleanly. Hospital clothes for patients, adequate and cleanly	2.0
4. Hospital buildings, kitchen, latrine, etc., adequately screened.	2.2
5. Miscellaneous furniture—chairs, medicine cabinets, bed-side tables, reclining chairs, etc.—adequate and sanitary	1.0
6. Lighting, both natural and artificial, should be suitable, adequate, and cleanly. Heating facilities should be sufficient.	1.0
7. Auxiliary rooms. Each ward of 8 or more beds should have its own bath, nurses' utility room, and water-closet or commode facilities, which should be adequately furnished, light and sanitary. Linen rooms, store rooms, janitors' closets, should be suitable for uses designated	2.2
8. Adequate stairways, hallways, and verandas, suitable fire protection and means of escape	1.0
9. Operating room. The lighting should be adequate and the floor and walls free from crevices, and rooms should be furnished with aseptic operating table and instrument table. Suitable instrument, dressing, and medicine cabinets. Suitable scrub-up arrangements for the surgeon. Sterilizing room should be separate and equipped with adequate sterilizers for water, instruments, and dressings	5.4
10. Laboratory. Should be light, clean, and adequately equipped with microscope, centrifuge, chemicals, glassware, alcohol stoves, etc	2.2
11. Accommodation for kitchen, laundry, storehouse, and servants	2.0
12. Adequate provision for contagious cases, also morgue	1.0
13. Suitable residences for doctors and nurses and native assistants	1.0
	25.0

III. House Management, 25 percent.	
1. Nursing system—competence and discipline of nursing staff and comfort and well-being of patients	6.5
2. House service system—competence and discipline of servants and orderlies, and cleanliness of buildings	6.0
3. Food system—competence of cooking and serving, and competent arrangement for a special diet	6.5
4. Laundry system	6.0
	25.0

IV. Evangelistic Efficiency, 25 percent.	
1. Pleasant and convenient chapel and sufficient and suitable literature for distribution	6.0
2. Sufficient competent evangelistic workers—i. e., preacher and Bible woman	6.3
3. Cooperative and direct work of foreign physicians and nurses in preaching to patients and evangelistic teaching of nurses and staff	6.4
4. Bible teaching and preaching by native assistants and nurses	6.3
	25.0

Two points of special importance, as suggested by the *China Medical Journal*, are the proper number of beds and the strength and character of the staff. The first question is important because, as hospitals are very few and cases of disease are exceedingly numerous, there is a great temptation to open hospitals too large for ordinary mission resources to staff and equipment. It is suggested that, except in large centers and unless there are ample financial resources and a strong medical staff to be relied on, the limit should be sixty beds.

West Virginia Hospital Association, a Correction

Some errors appeared in the list of officers of the West Virginia Hospital Association in our November issue, page 357. The list should have read: president, Dr. W. A. McMillan; first vice-president, Dr. C. S. Hoffman; second vice-president, Dr. A. H. Kessler; third vice-president, Dr. R. E. Vickers; secretary and treasurer, P. O. Clark.

Screens*

(In a Hospital)

BY W. M. LETTS

They put the screens around his bed;
A crumpled heap I saw him lie,
White counterpane and rough dark head,
Those screens—they showed that he would die.

They put the screens about his bed;
We might not play the gramophone,
And so we played at cards instead,
And left him dying there alone.

The covers on the screen are red,
The counterpanes are white and clean;
He might have lived and loved and wed,
But now he's done for at nineteen.

An ounce or more of Turkish lead,
He got his wound at Suvla Bay;
They've brought the Union Jack to spread
Upon him when he goes away.

He'll want those three red screens no more,
Another man will get his bed;
We'll make the row we did before,
But—Jove!—I'm sorry that he's dead.

*From "The Spires of Oxford," a volume of war poems by Winifred M. Letts, published by E. P. Dutton.

The enormous influence of spiritual environment, of friendship, of happiness, of beauty, of success, of religion, is grievously, ludicrously underestimated by most physicians, nurses, and hospital superintendents. There are diseases that cannot be cured without friendship, patients that never will get well unless you can get them to make a success of something, or to conquer their own self-absorption by a self-devotion, losing their life to find it.—Richard C. Cabot, "Social Service and the Art of Healing."

HINTS FOR HOSPITAL SUPERINTENDENTS

Prepare to Do Some Painting

Now is a good time to think about doing some pretty general painting in the hospital, especially if you hire your painters by the day. Outside commercial work is slowing down now, or will do so as soon as the inclement weather comes, and a good many painters will have to be laid off unless they can find inside work. Oftentimes you will be able to hire even union men by the week or month in the winter time when you would not be able to do so during the spring and summer busy season.

Organization of Mechanical Forces

A good organization of the mechanical forces of the hospital can almost always be attained even in a small institution. Place the repair and upkeep work under your engineer. Keep a night engineer or fireman who knows something about plumbing, steamfitting, and water pipes. If you keep a carpenter, place him under the engineer also, and if you send out for a carpenter to do repair work, the engineer will be able to direct that work and keep check on time and bills better than anyone else. There should be a requisition form for all repair and alteration work, with spaces for time, material, and other necessary data, as to who did the work, when begun, when completed, and what it cost.

Courtesy in the Front Office

Better get a line occasionally on just what your front-office people are doing about the reception of visitors, promptness of service, courtesies, etc. Many a disgruntled friend of a patient has been smoothed out at the front office, when he might have gone away to make a lot of trouble. And many a liberal donation has been headed off by discourtesy at the front door.

Sick people and their relatives and friends are not under the best mental condition in the hospital, and it is as necessary a service to calm their feelings and soothe them mentally as it is to treat the disease—and courtesy costs so little.

One of the greatest hotel men in this country has a rule in all his hotels that "the guest is always right and the hotel is always wrong." If we could inculcate this ideal in our hospitals it would do much good.

Buying in War Time

Do not buy cheap things for your hospital just because good things come high. Especially just now there is a wider difference between the price and actual value of cheap things than there is in the matter of good things. We do not know how long this war is going to last, but we have every reason to expect that prices are going to remain pretty well up. A good commodity of any sort, which will last twice as long as a poor commodity, is worth a little more money, and superintendents and buyers for hospitals cannot afford cheap, short-lived commodities.

This is especially true in regard to hospital furnishings, beds, tables, bedding, linen and cotton goods, floor coverings, kitchen and laundry utensils, rubber goods, and janitor supplies; these are all things that last in proportion as they have high quality, and there never was a time in the hospital world when high quality was so greatly in demand as it is right now when even cheap things cost so much and when good things are so much better and will last so much longer.

Superintendents, Take Note!

The whole atmosphere of this country under the stimulus of the war and the feverish anxiety of the whole people to leave no stone unturned that will promise better health for everybody point to the establishment of some definite hospital standards. Superintendents had better take this to heart, because, with the demand for better hospital conditions, there is also coming a demand for trained, studious, courageous, and aggressive administrators, men and women who will study intelligently and take steps to solve some of the now unsolved managerial problems.

The question is: are you to get in step with the necessities of the hour, or do you intend to force your board to get a superintendent who will do the necessary things? We have been preaching this for years. Many superintendents have seen the signs and have read and interpreted them. But there are undoubtedly many incompetent people at the head of our hospitals, and they are going to be eliminated.

Humidity and Ventilation

When you walk through a ward and find your heart patients panting like a fish out of water, you had better look over the ventilation. Heart patients do not do well in too dry an atmosphere and their breathing becomes greatly labored.

And if you find that in the lung wards the patients are having trouble breathing you had better see if your humidity is too high. Tuberculosis and pneumonia do not do well in moist atmosphere.

In other words, it is the duty of the hospital superintendent to study the needs of various classes of patients in regard to ventilation, and to meet these needs. For study and checking purposes there should be a hygrometer in every acute disease ward, and with such an instrument, the studious and ambitious superintendent will find so much of interest and profit, from the standpoint of the patients' welfare that he will be able to make a very definite contribution to the work of the doctors.

Young Women for Training Schools

The stimulus of the war, the demands of the war for qualified nurses, and the patriotic anxiety of women to serve their country are working definitely towards a vastly increased amount of good material for training schools. Within the past three or four months it has come to pass that hospitals which had had great difficulty in obtaining probationers in the past have had no trouble on this score. Young women have been flocking into the training schools by thousands. Many hospitals have not had their share. There are generally reasons for this discrimination. We know doctors who will not recommend their own hospitals to the young women in the families for which they practice. This is an indictment against the hospital.

Any hospital having trouble about securing pupil nurses at this time had better take up the problem with its medical men and find out what is wrong. If the doctors cannot recommend the hospital to young women of their acquaintance, they ought to tell the superintendent of the hospital so, with the utmost frankness, and they ought to tell him why, and the superintendent, on his part should see to it that these reasons are adjusted.

Several thousand dollars will be expended in the near future in remodeling the Woman's Hospital at Nashville, Tenn.

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